Clinical Lecture

ON A CASE OF

HEAD INJURY FOLLOWED BY HEMIPLEGIA AND DILATED PUPIL.

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GENTLEMEN,—I will ask you in half an hour to go over with me to the post-mortem room that we may look inside the head of a man who died yesterday and whose case presented several symptoms of unusual interest. I am glad of the opportunity of talking to you about it before the necropsy is made. We shall be able to consider the case unfettered by any knowledge of what has been already found, and shall be free from the temptation of fitting our diagnosis to the revelations of the post-mortem room. That is a very easy and comfortable procedure, and I shall adopt the much more profitable course of telling you what were the arguments which led us to the conclusion that in this particular instance no good was likely to follow a resort to surgical measures. In every case of severe head injury that comes before him the surgeon has to ask himself whether by any operation that he can do he may save the patient's life. That question was forcibly put to us by the symptoms of this patient, whose head will presently be opened, and whose case has provided a good example of those sorts of problems and difficulties which seek for a solution in most cases of cranial injury. I will briefly describe the case. I will tell you what I believe to have been the lesions. I will ask you to weigh over again with me the arguments which occurred to us at the bedside, and we will then go and find out the mistakes we made as to matters of fact, of conjecture and of conclusion.

The patient, fifty years of age, was admitted at five on the afternoon of the 2nd March, half an hour after he had been thrown from the box-seat of a hearse, the horses of which had bolted. The man had been thrown violently on his head, and the abrasion and swelling and closure of the right lids told that he had alighted on the right fronto-temporal region of his skull. He had bled slightly from the nose. No fracture of any kind was to be felt, and there was no wound of the scalp. He was unconscious, deeply so, but by no means to the fullest extent; shouting at him evidently produced an impression, although no answer came, and when the hairs of his beard were pulled he resented the insult, raised his arms, contorted his face and slightly groaned. I was under the impression at the time that he was rather more inclined to move his left arm than his right, but there was no other indication of one-sided palsy. There was no facial paralysis, and the pupils were equal. That from the manner of his fall and the character of his symptoms the man had probably met with some serious brain injury there could hardly be any doubt, but so soon after the accident it was manifestly impossible to say how much of his unconsciousness might be due to concussion alone. Clearly at that time there was nothing whatever to call for the use of the trephine; there was no fracture or depression, no evidence that hæmorrhage in any quantity or in any reachable place was going on inside the skull. Late in the evening my house surgeon, Mr. Low, sent for me, and I saw the patient again at eleven, seven hours and a half after the accident. We failed to discover any change in his mental condition, and the pulse and respiration were the same as upon his admission, 70 and 18 respectively. Two symptoms, however, of vast importance and interest had now become developed—viz., undoubted right hemiplegia, leg, arm and right half of face being all paralysed; his arm dropped helpless when it was raised, differing altogether from the behaviour of the left arm; and the left angle of his mouth was decidedly drawn, whilst his right cheek and lips remained placid and expressionless. Further, there was dilatation and immobility of the right pupil, the left being small as it had been at first, and naturally responsive to the stimulus of light.

Let us consider these various symptoms separately and collectively and then I will tell you why, in spite of them, I was induced not to trephine. Remember that the man had fallen on the right side of his head, and that he now had right hemiplegia. The degree of the paralysis affecting the face as well as the limbs made it practically certain that there was a lesion somewhere in the opposite left hemisphere. What might the lesion be? Either extensive laceration and contusion of brain from *contrecoup*—a thing in the circumstances by no means improbable—or hæmorrhage upon the surface of the brain or at some place within its substance. Now we argued that even if a *contrecoup* surface lesion were the cause of the right hemiplegia, no operation that one could do would be of the smallest use in remedying the condition. To expose and remove the bruised part of a brain could really be of no practical good whatever. Was hæmorrhage, however, the lesion, and might we hope to remove a large clot, to the pressure of which the symptom hemiplegia was due? I answered No, because I felt sure that if the hemiplegia were due to a surface and reachable extravasation, such extravasation must of necessity be large—large enough to do something more than produce the considerable degree of hemiplegia we found, to cause general indications of brain compression as well. Like other organs of the body the brain is unable to perform its various functions, unless it be properly supplied with blood. A compressed brain, however, is a bloodless brain, blood cannot find the needful room to circulate through it, and after death you will find it pale and with its blood squeezed out of it: and so the symptoms of brain compression are those of annihilated function; mental processes are impossible, and coma becomes profound, the pulse and respiration become increasingly slow and laboured, the breathing is stertorous, all vital processes are put an end to, and death ensues. Our patient showed none of these conditions; he was certainly not more, he was perhaps rather less, comatose than on admission, and his pulse and respiration were not altered in the least. He ought, in my opinion, to have shown some more decided evidence of his brain being compressed, and I could not believe that his hemiplegia was the result of a hæmorrhage such as could be got at through a hole made with the trephine. I feared rather that there was hæmorrhage in some unreachable place in the centre of the hemisphere. Had there been a superficial widely distributed extravasation of blood in the so-called subarachnoid space, I thought it highly probable there would have been some sign of surface irritation in twitching of the right limbs and face rather than the decisive hemiplegia which we saw. Taking all these facts into consideration I definitely gave up any idea of using the trephine on the left side of the man's head. We had, however, still to do with a symptom of not less importance than the one I have named. This was the dilatation of the right pupil, and we had to consider whether that was a fact of such significance as to warrant operative interference at any other part of the head. I daresay you know that in cases of hæmorrhage from the middle meningeal artery dilatation of the pupil on the side of the hæmorrhage is a symptom which may be of much value in diagnosis. Mr. Hutchinson was, I believe, the first to call especial attention to it, and Mr. Jacobson, who has written an exhaustive monograph on this variety of intracranial hæmorrhage, even speaks of it as "Hutchinson's pupil." How is this dilatation brought about? By supposed gravitation and extension of the blood-clot, which, of course, lies between the dura mater and the bone, to the base of the skull, so as to interfere, by direct pressure upon it, with the function of the third nerve.[1] In some of the recorded cases a widely dilated pupil on the same side as the hæmorrhage has been a marked phenomenon. It was very necessary, therefore, to apply our knowledge of this fact to our own patient. The blow had been received, as you remember, on his skull at that part which I have spoken of as the right fronto-temporal region, not so very far from the place where the middle meningeal artery lies in contact with the anterior inferior angle of the parietal bone, and it is by no means impossible that the vessel may have been ruptured here, even though no fracture of the bone was to be felt. In one at least of the recorded cases of middle meningeal hæmorrhage the vessel had given way at the site of a fissure fracture—a mere crack in the parietal bone, which was quite undiscoverable from the outside. I was met, however, with this great objection to the likelihood of middle meningeal hæmorrhage having occurred in our patient by the entire absence of those general symptoms or

[1] On this point, however, the reader will do well to consult a recent paper by Dr. Dear on Cerebro-spinal Pressure: Journal of Pathology, No. 1, p. 51.

compression which had already made us conclude that his right hemiplegia was not the resultant symptom of any gross hæmorrhage on the opposite surface of the brain. It seemed to me a most unlikely thing that a hæmorrhage of such extent as to gravitate and extend to the base of the cranium and there cause pressure on a nerve should have failed to cause indications of compression of the whole brain, and so produce the symptoms of which I spoke a few moments ago. In all the cases where this dilatation of the pupil has been met with on the same side as a middle meningeal hæmorrhage the hæmorrhage has I believe been large and the coma has been increasingly profound. The symptoms have indeed been of such urgency that trephining was imperatively called for to rescue the patients from impending death. Our patient showed no such indications, and I came to the conclusion that his dilated pupil was due either to some small basal hæmorrhage, or, more probably, to a direct injury of the nerve in a fracture of the base of the skull running from before backwards and passing in the immediate neighbourhood of the clinoid processes where the third nerve lies. I felt therefore that no good whatever was likely to accrue from a trephine hole being made over the site of the middle meningeal artery, and we resolved to leave the man alone. Here let me interpolate a word as to fractures of the base. Commonly transverse in one or other of the fossæ a fracture may sometimes be found which runs from before backwards, all depending on the mode in which the injury has been inflicted. A fracture of the base is not in itself of much moment; its only importance lies in the fact that a basal fracture cannot well occur without grave concomitant injury to the brain. This it is which makes such cases frequently fatal. Could you succeed in fracturing a base without brain injury the fracture need not cause you more concern than fracture of the tibia or fibula.

The progress of our patient's case presented no new features of importance. The hemiplegia and the pupil remained the same, while the unconsciousness decidedly was less, during the whole of the next day (Thursday, the 3rd); and it was not until the morning of the 4th that his respiration became embarrassed, either because of pulmonary engorgement or because of concussion effects on the medulla. He died at midday, forty-four hours after the accident. These, then, were the facts of his case, and I hope it will not be without advantage to you to have tried with me once again to solve the problems which, like so many head cases, it presented. We may have been wrong in refraining from operation, but although trephining is not in itself dangerous one ought to have good reason for resorting to it, and not even appear to trephine for trephining's sake. I doubt in this particular case if anyone could have said where exactly he ought to have trephined had the question been put to him. I put it to myself and could not answer it, and I believe I had the full agreement of Mr. Low in what we did and refrained from doing. Before I end let me, then, say what I think it probable we shall find when the man's head has been opened. Contusion of the brain immediately beneath the site of the blow on the skull; contusion, and possibly severe laceration from *contrecoup* in the opposite left hemisphere; some inconsiderable hæmorrhage upon the surface and in the neighbourhood of this contusion, but more probably a larger intra-cerebral hæmorrhage which has destroyed some part near the corpus striatum and the great motor tract on the left side; some small hæmorrhages at the base of the cranium, not from the middle meningeal artery, which may have interfered with the third nerve, but more probable than this I think will be the existence of a basal fracture running from before backwards and directly injuring that nerve in the neighbourhood of the clinoid processes. Now let us go and see whether we were right or wrong in not using the trephine, even though we were in face of two such prominent facts as hemiplegia and a dilated pupil.

Abstract from notes of necropsy by Mr. J. J. Clarke.—Abrasion over the right frontal eminence, with ecchymosis on both sides of the cranial aponeurosis corresponding to the abraded region. The pericranium separated more easily than usual over the frontal region. No fracture was to be seen at any part of the exposed calvarium. The dura mater was throughout abnormally adherent to the bone. Over the posterior parts of the occipital lobes there was a small amount of blood free beneath the arachnoid. In the anterior, middle and posterior fossæ of the right side of the skull there were a number of small clots, and in the posterior fossa a considerable quantity, say 2 oz., of liquid blood. When the dura mater had been removed from the base a fissure fracture was discovered which started from near the external angular process of the frontal bone (right), crossed the right orbital plate, the right optic foramen and the anterior border of the sphenoidal fissure at its inner end, and detached the anterior clinoid process. The right third nerve was torn (?) in removing the dura mater, and its precise condition was therefore undetermined. No gross lesion was seen in the optic nerve. In the frontal lobes of both hemispheres—in that of the right more especially—there were numerous small areas of hæmorrhagic softening bruises, but there was no evidence of contusion from *contrecoup* in the occipital lobes. In the middle of the left internal capsule there was a hæmorrhage the size of a horse bean. There was no blood in the ventricles.

These notes speak for themselves, and the only point to which I would especially refer is the internal capsule hæmorrhage. Here was a hæmorrhage such as is commonly seen quite independent of injury in the usual place and with the usual symptoms. The brain was not bruised to any degree at this spot; it was not, indeed, the spot where it was likely to be affected by *contrecoup*, and *contrecoup* lesions were markedly absent just where they had been expected. It seems probable therefore that the man had a diseased vessel at the time of the accident, and that the violence of the concussion caused it to give way. In favour of this view is the fact that the man looked much older than his years, that his kidneys were undoubtedly cirrhosed, and that there was atheromatous thickening of his aortic valves.

Clinical Lecture

ON THE

DIFFICULTIES AND DANGERS WHICH MAY ARISE FROM INDISCRIMINATE ATTEMPTS AT THE REDUCTION OF STRANGULATED HERNIÆ BY MANIPULATION.

Delivered in St. George's Hospital Medical School,

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GENTLEMEN,—It is, I assume, a matter of common knowledge that many methods of treatment in themselves excellent, and when properly used of much practical utility, may under certain conditions be not only harmful but perhaps disastrous, especially if applied without discretion by any person who does not possess the knowledge or skill requisite for their safe employment. The means available for the reduction of a strangulated hernia without operation form no exception to this rule, and by an unusual chance there are now under my care two patients lying in the Harris ward, separated from each other by a single bed only, whose cases illustrate this fact in a remarkable way,

CASE 1. *Strangulated inguinal hernia; prolonged unsuccessful taxis; herniotomy; gut found partially lacerated; suture of bowel; radical cure; recovery.*—W. F——, a man aged twenty-seven, was admitted on Nov. 18th, 1891. In the previous April he found for the first time that he was ruptured on the right side. The hernia was always reducible, and a truss was continually worn. On the morning of the day before the patient came into the hospital the spring of the truss broke and he was therefore obliged to work without it. The hernia soon came down, and he was unable to reduce it. Vomiting thereupon set in, and during the night occurred many times. A few hours before his admission an attempt, lasting about a quarter of an hour, was made to reduce the hernia by manipulation, but without success, the patient suffering great pain, especially during the latter part of the attempt. The bowels acted regularly up to the morning of the 16th. On admission the man had an anxious look and was evidently in very acute pain. There was occasional retching, by which a small quantity of sour-smelling gastric contents was brought up. The tongue was white, but moist; the pulse 100 and fairly full. In the right side of the scrotum and running up to the groin was a large, acutely painful and tender swelling, very tense, resonant and entirely without impulse. There was much

pain about the umbilical region and also some tenderness over the hypogastrium, but no distension. Having regard to the prolonged taxis to which the hernia had been already subjected, no further attempt at reduction by manipulation was made, herniotomy being at once performed. Upon opening the sac several ounces of reddish fluid, containing air, escaped. A large knuckle of greatly distended gut then came into view, deeply congested and gently glued to the lower part of the sac by very recent peritonitis. On freely exposing this gut, by laying open the sac from end to end, there was found over its most prominent part (i.e., at the anterior aspect of its lower end) a longitudinal laceration involving the peritoneum for about an inch; over half its length this rent passed through the subjacent muscular coat, from the opening in which the mucous membrane protruded, and seemed on the point of bursting. The stricture, which was at the inner ring and extremely tight, was then very freely divided with the hope that the tension in the gut would be thus sufficiently modified to allow of the wound in the bowel walls being sutured. This, however, was found to be impracticable, as the stitches immediately cut their way out, the tension not being sufficiently relieved spontaneously. It was at the same time clear that any attempt to reduce the tension by pressing the air contained in the bowel back into the abdomen would result in the rupture of the protruding mucous membrane, which I was particularly anxious to avoid for reasons to be presently discussed. I therefore selected the healthiest available spot on the bowel, and there punctured it with an exploring trocar, afterwards emptying the knuckle of gut of the contents, which consisted principally of altered blood, through the cannula. This having been done the gut naturally collapsed. The wound in its walls was then brought together with perfect ease and safety by means of five Lembert sutures of silk. A single suture of the same kind having been passed across the small peritoneal wound made by the trocar, the bowel was finally thoroughly cleansed and returned into the abdomen. The neck of the sac was then isolated, ligatured, and severed from the scrotal portion; the pillars of the ring were closed by kangaroo tendon sutures, a drainage-tube inserted, and the superficial wound united with silkworm gut. On the 20th four loose motions containing altered blood were passed. The bowels acted daily after this, and by Dec. 18th the patient was walking about the ward apparently in perfect health. In fact, he was practically well by Dec. 4th, but being very apprehensive about himself he was allowed to remain in bed longer than was really necessary. In addition to the points specially relating to the main subject of the present lecture, this case affords a good illustration of the successful treatment of cases of the kind by a method to which I wish to call particular attention. In all instances of strangulated hernia in which the laceration of the bowel does not involve the whole thickness of its walls, so that the intestinal canal is not opened up, the gut as the result of the strangulation is of course greatly distended. In attempting to bring together the edges of the wound under these circumstances difficulty generally arises in consequence of the sutures cutting their way so readily through the peritoneum, that sufficient traction cannot be made upon them to effect the closure of the laceration with any safety. This tendency on the part of the stitches to cut their way out is due partly to the unyielding tension of the bowel and partly to the softening of its coats from pathological changes. Not only therefore is very little pressure required under such circumstances to increase the rent in the peritoneum, but when the tear involves the whole thickness of the muscular coat the mucous membrane bulges through the wound, and extremely slight force only is necessary to cause the protruding portion to give way, thus converting an incomplete laceration into a wound opening up the intestinal canal.

In cases of this sort it is sometimes also found that even after free division of the stricture no sufficient alteration in the tension occurs until digital pressure is used, which may be quite sufficient to burst the stretched and protruding mucous membrane—an accident which it is most important to avoid if possible, not only because it must of necessity allow the bowel contents to escape over the wound, but also because the protruding membrane is usually so thin and injured that if it is damaged further by laceration, incision or puncture, ulceration, and perhaps sloughing, is prone to occur later on, and give rise to trouble which may possibly be serious. In order to diminish the tension of the bowel and to allow of its shrinking of its own accord and without any necessity for inflicting further injury upon the protruding mucous membrane, I adopt and confidently recommend the following plan, which, it will be noticed, was used in this case.

The stricture having been freely divided, and the distended knuckle of gut carefully cleansed, an exploring trocar is passed into the bowel through the portion of its walls which appears most healthy (i.e., at a point which is certain to be somewhat remote from the laceration). The contents of the gut, consisting generally for the most part of altered blood, pass out easily through the cannula into a suitable receptacle, and are thus conducted quite away from the peritoneum, which therefore remains entirely unsoiled, as the muscular coat at the point of puncture clings so closely to the cannula that no leakage takes place. On the other hand, if the puncture be made in the protruding mucous membrane, leakage is certain, and soiling of the whole rent occurs, in addition to the injury inflicted by the puncture on the damaged structures. The collapse of the gut which follows spontaneously makes the approximation of the peritoneal surface over the laceration perfectly easy and safe, no matter how softened the intestinal walls may be. The gut may then be returned without hesitation, after it has been finally cleansed and a single Lembert suture placed across the little nick in the peritoneum at the seat of the puncture. This last detail is perhaps hardly necessary, but it is a source of additional safety during the return of the bowel, and adds nothing material to the length of the operation. The method here described of relieving tension in damaged or partially lacerated bowel by puncture through the healthier parts rather than through those which are most injured has, so far as I know, not been previously insisted upon but I am sure it is worthy of adoption.

CASE 2. *Inguinal hernia with large hydrocele; attempted reduction by patient; rupture of wall of hydrocele, which was thus converted into a hæmatocele.*—W. B——, a labourer aged fifty-three, was admitted into Harris ward on Nov. 21st, 1891, with the following history. Three years previously he commenced wearing a truss, as he was told he had a rupture; and about eighteen months later he noticed some swelling of the scrotum which, upon applying to the Truss Society, he was told was not a hernia. On the day before he came to the hospital he felt some pain about the groin and noticed more swelling there than he had previously seen. Thereupon, thinking it was the hernia which had come down, he attempted to put it back by seizing the whole scrotal tumour in his hands and using considerable force. No immediate alteration was produced in the swelling, but acute pain followed directly, and in a few hours the whole scrotum became almost black. The pain gradually decreased, but much tenderness followed, on account of which he applied for treatment. On admission the patient was a big, strong-looking man. The left side of the scrotum was much discoloured and distended by an oval swelling, very tense, tender, and non-translucent. Its upper end was quite free from the abdominal ring, which was large, and through it a hernia came down when the patient coughed. The bruising slowly disappeared, and the swelling decreased a little in size after rest in bed. On Dec. 17th I laid open the scrotal tumour, letting out a quantity of hydrocele fluid and altered blood. On examining the walls of the cyst there was found at the upper and inner part a large rent, admitting the ends of three fingers, which passed into a considerable space beneath the scrotal integuments. The parts about this were matted together with recent inflammatory material and the walls of the hæmatocele were covered with new lymph. The hernia was not exposed in the operation, as it was thought wiser, considering the inflamed condition of the tissues, to postpone its radical cure, which the patient was anxious to have performed, until a subsequent date. The patient naturally made an uninterrupted recovery.

The main point of individual interest in this case is the fact that the injury was self-inflicted. Although the lesion produced here by the patient's manipulation was not a serious one it may sometimes be so. I have myself had an opportunity of seeing an instance in which taxis applied by the patient resulted in a small rent in the gut through which some fœcal material had escaped into the sac. It is true that the gut at the seat of injury had obviously been adherent and the laceration had resulted from the tearing away of the adhesion by the force applied; the fact, however, is significant that laceration of the bowel itself was produced by no more violent manipulation than that applied by the patient himself, who was perfectly accustomed to reduce his rupture.

The main possible disasters which may immediately follow upon attempts at the reduction of herniæ by taxis may be summarised as follows:—(1) Bruising of the bowel; (2) rup-

ture of the bowel walls, complete and incomplete; (3) laceration of adhesions; (4) rupture of the sac; (5) hæmatocele (in cases complicated with hydrocele); (6) Hæmatoma of scrotum and surrounding parts; (7) reduction of the whole hernia with the sac (reduction *en bloc*).

1. *Bruising of the bowel.*—Some bruising, as shown by subperitoneal extravasation, of large or small extent, about the herniated bowel will be found in the majority of cases which have been submitted to taxis unless extreme gentleness only has been used. The extent and severity will naturally depend, for the most part, upon the amount and direction of the force applied and to a considerable degree upon the condition of the gut, which bruises more readily when greatly distended, especially in neglected cases which have been allowed to continue for a long period without treatment. It is interesting to note that bruising of the bowel, if in any way extensive, although without any apparent breach of surface on the peritoneal aspect, is almost invariably associated with bleeding into the intestinal canal, a fact conclusively demonstrated in many cases by the characteristic appearances of the first motion passed after the relief of the stricture, which nearly always contains altered blood. It may, in fact, be accepted without reserve that attempts at reduction by manipulation produce some bruising of the bowel in the great majority of cases of strangulated hernia. At the same time it may be fairly admitted that as a rule, unless great carelessness has been used, no permanent harm results. It is nevertheless necessary to insist on the occurrence of injury of the kind in order to give weight to the fact that attempts at reduction by manipulation are liable at times to cause injury. Taxis therefore should not be regarded, as it seems to be by some people, as a plan of treatment which if it fails to reduce the rupture, at least can do no harm. This last remark must not be taken to imply any objection to the proper practice of this method, but merely as a warning against its use carelessly and without due regard to possible evils which may under certain conditions result.

2. *Laceration of the bowel.*—This may of course involve the whole thickness of the intestinal wall or only one or more of its coats; the former is naturally the most serious since it allows of the escape of fæces into the sac. The latter condition may vary in degree from an almost imperceptible crack in the peritoneum to a laceration in the peritoneal and muscular coats inches in length, in which case the mucous coat protrudes, hernia-like, through the opening in the muscular wall. Whether the laceration is partial or complete the treatment is identical. The edges of the wound must be brought together with Lembert sutures, care being taken that the end stitches—if the lesion is of any extent—are placed a short distance beyond the extremities of the rent. When the gut is too tense to allow of approximation of the peritoneal surfaces it should, if necessary, be emptied in the way I have described in the first of the cases which form the text of this lecture. However small the crack in the peritoneum is, even if it be hardly perceptible to the eye, a single suture should be passed across it. If the condition of the patient in cases of partial laceration is so desperate that the delay entailed by the suturing process is not justifiable the gut should be cleansed and returned into the abdomen, an unperforated drainage tube of large calibre being left lying in the canal in the way I have recommended in a lecture published in THE LANCET in 1890.

A point of great interest to which sufficient attention has not, I think, of late been paid arises here with reference to the situation at which laceration from injury occurs in these cases. There appears to be an idea, which is traditional and supported by the teaching of the schools now, that the tear produced by injury in the gut of a strangulated hernia takes place *at the seat of stricture* in consequence of the way in which the sharp edges of the constricting tissues, as it were, cut into the distended bowel when pressure is exerted upon it.

Now I have seen several cases myself in which a rent in the gut was undoubtedly produced by taxis, and in two of these the lesion *was not at the point of constriction but on the prominent bulging and most distended portion of the bowel.* Both of these cases were recent, and in each the rent was in the long axis of the gut. The same result followed in some experiments made by me on the cadaver, artificial strangulation in two cases of old herniæ having been produced by inflating the bowel from the abdomen and forming a stricture by ligaturing the neck of the sac together with its contents. The hernia was in one instance then violently crushed and in the other struck sharply with a stick; in both the laceration occurred on the prominent part of the strangulated knuckle and in the long axis of the gut. On consideration, this result, so far as the situation of the injury is concerned, is, I think, precisely what should be expected in recent cases, for in such the rent begins in the peritoneum, which under pressure naturally gives way at the weakest point (that is to say, where it is most thinned and stretched by distension). A sudden blow, therefore, or prolonged hard pressure would as a matter of course lacerate the peritoneum in the part most stretched and thin—i.e., over the end of the distended knuckle rather than at the seat of constriction, where not only is it unstretched, but where it is actually supported by the surrounding parts.

In cases far advanced and neglected the state of affairs is altogether different, because in them the gut at the seat of stricture is indented by the edge of the constricting tissues, partially eaten through by ulceration from within, or perhaps gangrenous and on the point of giving way. Then the weakest point is at the strictured part, and very little force may be necessary to complete the perforation which has already commenced. It is, I presume, in connexion with cases of this latter kind that the traditional teaching has been fostered, for in recent cases of strangulation it certainly does not apply.

3. *Rupture of adhesions in the sac.*—The tearing of recent adhesions during attempts at reduction by manipulation need not have any serious result, but free hæmorrhage into the sac may thus be produced so as to fill it completely with blood, although no serious lesion may be apparent. In old irreducible herniæ, in which band-like adhesions sometimes exist between the bowel and the sac wall or between different parts of the bowel itself, no harmful results need follow if the adhesions themselves give way, but if, as may happen, an adhesion brings away some of the intestinal peritoneum with it, a partial laceration of the gut results, which is, if at all extensive, a serious condition, especially if the case has been neglected and operation long deferred.

4. *Rupture of the sac.*—This, although a recognised injury and classed as one of the modifications of the reduction *en masse*, must be a very rare sequence of taxis, as the amount of force required to tear the sac is very great and would hardly be intentionally applied. Bruising of the sac is, however, common and I have seen a portion of its wall torn away with an omental adhesion; this, however, is not a rupture in the sense under discussion—i.e., a splitting of the sac wall from sudden or gradual pressure. In the post-mortem room I have not been able in artificially strangulated herniæ to rupture the sac without also bursting the gut. Rupture of the sac is therefore probably too rare to be other than a curiosity; indeed Sir Astley Cooper, after his large experience, says that it "scarcely ever" occurs from any cause. Formerly spontaneous rupture of the sac was also a recognised condition, but actual evidence of its existence seems wanting, or at all events is not convincing.

5. *Hæmatocele.*—A good example of this accident is afforded by Case 2, described in this lecture. After what I have said concerning the difficulty in causing rupture of a hernial sac it may at first sight seem strange that the sac of a hydrocele should give way so easily. There is nothing inconsistent, however, in this, for it must be borne in mind that the sacs of hydrocele sometimes undergo pathological changes which result in softening and thinning, so that they become weak in parts.

6. *Hæmatoma from rupture of a large vein or veins outside the sac.*—Enormous blood extravasation may be thus produced and occasionally upon the application of comparatively slight force, especially in elderly people. I once had an opportunity of seeing a large blood swelling involving the scrotum and groin, which were nearly black from discolouration, said to have followed upon nothing more violent than the manipulation necessary for the adjustment of a truss to an easily reducible hernia in a subject nearly eighty years old.

7. *Reduction "en bloc"—i.e., the reduction of the sac, together with its contents, the strangulation being therefore unrelieved.*—The only point to which I need here call attention in this respect is the singularly small amount of force which sometimes seems necessary to produce this accident. I have personally seen only one case, and that was not in my own practice. The hernial tumour seemed to disappear almost the moment the hand was laid upon it and certainly before there was time for the application of any methodical violence. So much was this the fact that I cannot help feeling that there must be in such a case some kind of spontaneous action from

above which contributes to the reduction. Is it possible that extreme irregular spasmodic attempts at peristalsis may act in this way?

It is only fitting that such an ominous list of casualties, which are not only possible, but actually occur in practice as the result of the use of taxis, should be followed by some indication as to when and how the reduction of an irreducible hernia by manipulation may be attempted without risk. The relative safety of this plan of treatment is dependent on three conditions. (1) The manner in which the taxis is applied; (2) the period during which the manipulation is persisted in; and (3) the state of the hernia.

1. *The mode of applying taxis.*—This may appear such a purely elementary point as to render its consideration hardly justifiable outside the pages of a student's text book. It is nevertheless true that practitioners, otherwise intelligent and trustworthy, do at times manipulate a hernia in the manner best calculated to cause injury to the contents of the sac, whilst it affords the least possible chance of effecting reduction. I do not propose to occupy time now with a description of the method by which the taxis may be applied safely and with a fair prospect of success, as it can be more usefully learnt from practical demonstration at the bedside, but some of the details of the process are so important and essential that they require a passing notice. The details referred to are as follows: (α) All manipulations should be conducted only with thoroughly warm hands; (β) the neck of the hernia should be firmly supported by one hand whilst the other manipulates the body of the tumour. (γ) In using the fingers all pressure from the finger-ends should be made by *the front of the digital pad and never by the actual tips.* (δ) The pressure necessary in the manipulations should be gentle, firm and regular, not forcible, unsteady and spasmodic. The necessity for warm hands, for the support afforded to the neck of the hernia, and for the avoidance of the use of the actual finger tips, is, I cannot help feeling, not so universally acknowledged as it certainly should be, for I have more than once seen attempts made at the reduction of a rupture by grasping the body of the tumour with hands almost blue with cold, the neck of the hernia being left entirely unsupported, and then with a punching and rolling movement, during which the finger tips have been deeply pressed into the parts, the force has been gradually increased until further persistence in the attempt has been rendered impracticable by the protests of the patient. Where injury is possible it is from some such faulty plan as this that it is most likely to result. The cold hands excite every resistance in the way of muscular action; the want of support to the neck of the hernia makes its reduction very unlikely by allowing the gut to bulge over the margins of the constricting ring, and, beyond this, in neglected or long-standing cases, when the bowel has commenced to ulcerate from within, the pressure of the sharp edges of the stricture acts at a great advantage in further injuring and perhaps bursting the thinned and weakened intestinal walls. Finally the sharply indenting finger tips are admirably adapted for causing an unnecessary amount of bruising and possibly laceration of the gut.

2. *The time which should be occupied in taxis.*—Judging from my own experience, and from what I have seen in the practice of others, five minutes should be taken as the outside limit during which manipulation of a hernia in cases of apparent strangulation or when impulse on coughing is absent may be with safety persisted in, no matter how gently it is applied. In unstrangulated cases the same time should always be considered as sufficient, for, although no actual harm need result, if the time be extended it may very easily produce it; moreover, if success is not attained by the end of five minutes it is very unlikely to result at all, and further attempts are practically useless.

3. *The condition of the hernia.*—When properly applied and with the precautions just mentioned taxis may be used with safety—(*a*) in all cases in which the true hernial impulse is present, provided always that there is neither any marked tenderness nor inflammation in the sac or its contents, when its employment would of course be entirely negatived; (*b*) in very recent cases of strangulation where the tension is not extreme. This latter is a recognised principle and is therefore worthy of respect, but I very much doubt whether it is possible, excepting perhaps in infants, to reduce by manipulation any rupture in which the hernial impulse is not present. For myself at least I must admit that I have never been able to return with any reasonable application of force a hernia in which I could detect no impulse. This impulse, it is true may have sometimes been slight, but it was present all the same in the cases where reduction was possible, although it must be admitted that I could not always demonstrate it to my house surgeons in the hospital patients. A large distended hernia universally resonant should be treated with more than usual gentleness, for in such cases the bowel is far more liable to injury than in any other kind, especially if adhesions happen to exist in the sac. Hernial tumours dull on percussion, with omental or fluid contents, may be manipulated with greater freedom without much risk of damage being done, but in these reduction is entirely out of the question in the absence of impulse, the utility therefore of persistence in the attempt at all under these circumstances is not plain. Every case of apparently strangulated hernia must necessarily be treated upon its individual merits, but, for my own part, I am sure that, as a general principle, it is better in herniæ which are obviously strangulated and entirely without impulse to perform herniotomy at once rather than make attempts at reduction by manipulation, because I have no doubt whatever that early herniotomy in fairly competent hands is infinitely less hazardous than an unwise persistence in fruitless attempts at reduction by taxis. If due regard be paid to the patient's welfare, one thing at least is certain—viz., that a strangulated hernia which has once been subjected to taxis should be operated upon at once, and no further manipulation used until after the tumour has been explored and the stricture freely divided.

It must not be imagined that all risk of lacerating the bowel during attempts at its reduction necessarily ends after the sac has been laid open in herniotomy, or indeed in every case after the stricture has been divided, for, although to the best of my knowledge the accident has not occurred under these circumstances in my practice, I have been present at an operation in which a surgeon of experience certainly did produce a laceration in the peritoneal coat of the bowel, whilst attempting to reduce it after the division of the stricture which obviously gave rise to the strangulation. This difficulty sometimes experienced in reducing the hernia after the stricture has been cut is undoubtedly as often as not due to the division being not sufficiently free, the little nick so commonly recommended being too slight for securing the necessary relaxation of the constricting band. I am sure, from my own observation that harm is more often likely to arise from too slight a division of the stricture than from one which is too free. Free division of the parts about the neck of the hernia as a rule entirely obviates any chance of injury to the gut, whilst the possible anatomical dangers entailed in this free incision have been, I have no hesitation in saying, unduly exaggerated.

Although I make a practice of dividing the stricture freely, I have never had the slightest cause to regret it, and certainly have never seen any hæmorrhage which has given the least anxiety under these circumstances. The only case in which I have had any trouble whatever on account of bleeding after herniotomy was a strangulated umbilical hernia, in which alarming hæmorrhage took place into the abdominal cavity from a torn omental vein. This vessel was almost certainly burst by the force which was necessary for the return of the hernia through a ring which had been only slightly divided; had the division been altogether more free the hernia could have been reduced without any force and the vessel would, I believe, have undoubtedly remained intact.

I now come to a point which is especially interesting in connexion with a further difficulty which occasionally arises in the reduction of a hernia, even after the stricture has been freely divided. At first sight it is a singular fact that any difficulty should occur at all under these conditions, still it is quite certain that it is sometimes met with. For instance, in a case of inguinal hernia under my own care I was unable, after repeated division of the stricture, to reduce the intestine, although on passing the finger, as is my habit, through the canal into the abdominal cavity, I could feel nothing in any way constricting the bowel. The only noticeable thing to be felt was a loose membranous fold which, springing from the outer wall of the canal, lay quite flaccid upon the gut, and allowed my finger to pass by it with perfect ease. Whilst I was attempting to return the bowel, the end of one finger being placed on it just below this fold, I noticed that as the gut was pushed against the flaccid flap the latter seemed to grip the bowel after the manner of a sling. I therefore divided the fold, and then returned the hernia without the least trouble. Here, then,

the obstacle to reduction was clearly this loose sling-like fold. The existence of membranous flaps like this and the manner in which they sometimes resist the return of the gut in operation for strangulated hernia have not of late received the attention they merit. Bands and flaps of this kind, which are not very rare, should invariably be divided whether they seem to compress the bowel or not, for if they do not actually prevent reduction it will be much more easily effected after their division. The history and mode of formation of these interesting folds may be conveniently reserved for consideration in another lecture.

A CASE OF CEREBRO-SPINAL FEVER FOLLOWED BY RECOVERY.

BY WM. ARMSTRONG, L.R.C.P., L.R.C.S. EDIN., L.S.A.

I WAS called shortly after 6 A.M. on May 11th to see A. B——, aged eleven years, who had been suddenly seized with intense pain in the head. The history of the case is as follows. On May 9th the patient was apparently well, and played football in a hot sun. After returning home he complained of feeling tired, and shortly after vomited bilious matter; he was hot and feverish. His mother, thinking he was bilious, administered a purgative draught. During the next day he remained in much the same condition, but on the following morning at 6 A.M. he was suddenly roused by a loud blast from a hooter, and at once complained of intense pain in the head, and became very restless and excited. I could obtain no history whatever of pain or discharge from either ear. On my seeing the patient he presented the following appearance. He lay on his back with his head on one side, the lower limbs being flexed on the abdomen. The face was flushed, conjunctivæ injected, pupils unequal, dilated, and sluggish, with great intolerance of light. Temperature 103·8°, pulse 120, very excited. On examining the chest, the heart was seen beating violently with a forcible impulse. The abdomen was rather retracted; no tenderness or pain on pressure; no tympanites. No other abdominal symptoms. Slight diarrhœa, which was probably due to the purgative which had been administered. Tongue very furred in the centre and red at the edges. The patient kept crying out "Oh, dear!" in a very distressed way, and did not seem to understand questions put to him. He said that the worst pain was over the temples. He vomited green matter whilst I was there. By way of treatment, I ordered the head to be shaved and an ice-bag applied and prescribed three grains of calomel and a mixture containing five-grain doses of bromide of potassium, the diet to be milk with soda-water or lime-water. During the first week the temperature ranged between 101° and 104° and the pulse between 108 and 120. The headache was much the same, but considerably relieved after each dose of medicine. The patient complained of pain in the back of the neck, down the spine, in the arms and at the pit of the stomach. The position he assumed was one of partial flexion; the head was thrown well back and there was marked stiffness of the neck. There was also marked hyperæsthesia all over the body. The tongue remained very furred; bowels rather constipated; there was no enlargement of the spleen. He continued very restless and delirious, at times being in a condition of stupor. There was great intolerance of light; sluggish pupils with strabismus of the left eye. A large quantity of pale urine was passed. The lower lobes of both lungs became congested. During the second week the patient improved a little and took nourishment well. There was now marked retraction of the abdomen. As he passed very wakeful restless nights I prescribed a draught containing fifteen grains of bromide of potassium and five grains of chloral hydrate with success. Temperature about 102°. At the end of the third week the temperature fell to normal; pulse 80; bowels constipated; there was a good deal of pain in the hips, down the spine, in each leg and also in the neck; a small mustard poultice placed behind the ear relieved the latter; general condition improving; diplopia and strabismus occasionally present. On May 30th the patient became very much worse. Temperature 104·8°; pulse 120. Herpes round the mouth, with sordes on the teeth and tongue; the latter was very dirty looking. He vomited, complained of his head, and lay in a stupor. As an error in diet was traced I ordered a tablespoonful of castor-oil, and on June 1st he was much better, with a normal temperature. After this the improvement continued. The appetite was very good. He occasionally complained of frontal headache, but there were no other pains. The intolerance of light gradually lessened, but diplopia of the left eye was present until June 8th. Ordered to have a farinaceous diet with a little fish.—June 10th: Patient very much improved; convalescence rapidly advanced.—July 9th: Went away to the seaside, apparently quite well.

Remarks.—The patient is said to have lost a sister aged four years of acute meningitis, death taking place in twenty-six hours; the supposed cause was a chill. There is no tubercular history on either side of the family. During the whole of the present attack careful examination failed to detect any sign of pulmonary tuberculosis. The patient is an intelligent, precocious lad, very fond of books. Last December, whilst on a visit at Congleton, he had an attack of illness, in which the following symptoms were present: frontal headache, vomiting, constipation, fever, with loss of appetite for seven days. The case was diagnosed by the medical man as "slow fever." With respect to the term of "diplopia of the left eye" used in the description of the case, the following are the facts. When the left eye was closed vision was normal; when the right eye was closed the patient said he saw two doctors or two mothers with the left eye.

Pontesbury, Salop.

THE CONDITION OF TWENTY-FOUR CASES OF EMPYEMA IN CHILDREN AFTER CURE BY RESECTION OF RIB.

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THE operation of resection of a portion of a rib, with free drainage of the pleural cavity, is one now generally performed in empyema after other treatment has failed; but the ultimate results of the operation as regards deformity, &c., are not well known, because the patients are not, as a rule, kept under observation after the wound has healed, although there are still abnormal physical signs in all cases. With the view of ascertaining what is the condition of cases of empyema in children after a considerable period has elapsed from the date of discharge from hospital, we have examined as many old patients of the East London Hospital for Children as were accessible. All the patients in the hospital books for the last eight years have been written for, but the great majority having changed their residences since leaving the hospital the letters addressed to them have been returned undelivered. In a few other cases no notice was taken, although the letters were apparently delivered. We have been able to examine 24 cases, all of whom had had a portion of one rib excised, and notes of their present condition are given below. The following figures show the periods which have elapsed since the operations were performed: Seven years in 2 cases, four to five in 4 cases, three to four in 2 cases, two to three in 7 cases, one to two in 6 cases, and less than one year in 3 cases. The ages of the patients at the time of operation were as follows: One year in 2 cases, two years in 6 cases, three in 2 cases, four in 3 cases, five in 3 cases, six in 3 cases, seven in 1 case, eight in 1 case, nine in 2 cases, thirteen in 1 case.

The causation of the empyema is in most of our cases doubtful, the patients having been brought to the hospital only when the disease had reached a more or less chronic stage; but it is stated to have been the result of pleuro-pneumonia in some of them, and it was probably a sequela of this disease in most cases. It is difficult to obtain an accurate account of symptoms, as most of the children are too young to give a statement of their own symptoms and their mothers are either unobservant or, being at work all day, ignorant of them. It is impossible to get an account of the symptoms without putting leading questions, and the description of them must therefore be taken with some reserve. There was pain in the affected side in two cases, but only occasionally. In eight there was a history of cough, but in only one was it stated that the cough was severe.

Four" of these eight cases had slight bronchitis when examined, and another had granular pharyngitis, to which the cough was probably due. Two of the eight were said also to suffer from shortness of breath. One child was stated to be wasting. In her case the wound continued to discharge for nearly two years; the child had scarlet fever during this time, and the physical signs now suggest dilatation of bronchi. (*Vide* Case 24, A. T——.)

Coming now to the more certain ground of physical examination, we find that the results are better than the account given by the mothers would have led us to expect; the completeness of the recovery in the great majority of cases has indeed surprised us. The general nutrition was good in 19 cases, and fair in 5. Not one of them looked wasted or ill. In the majority of the cases inspection of the chest gave no indication of disease beyond the presence of the scar. The spine was straight in 19 cases, slightly curved in 3, and distinctly curved in the remaining 2. In 15 patients the shoulders were on the same level; in 7 the shoulder on the side on which the empyema had been was slightly lower, and in 2 the shoulder was distinctly lower. In no case was there distinct and obvious flattening of the chest wall; in 16 there was complete absence of flattening, and in the remaining 8 there was a slight degree of flattening. The gap made in the rib by the operation appeared to be closed with bone in all. No difference could be made out between the movements of the two sides in 14 cases; in 8 the expansion was slightly less on the diseased side, and in 2 there was a distinct deficiency of movement. The results from percussion were as follows: Complete absence of dulness was found in 8 cases; in 7 there was some dulness in the immediate neighbourhood of the scar, no doubt due to the inflammatory thickening and increased rigidity of the parts there; in 5 there was slight dulness over a more extensive area; and in the remaining 4 there was distinct dulness. The breath sounds were unaltered in character and equal on the two sides in 10 cases; in 2 they were rather weaker in the situation of the scar; in 10 there was weakness of breath sounds over a considerable area of the diseased side as compared with the breath sounds on the healthy side, the difference being only slight in 3 cases; in the remaining 2 the breath sounds were distinctly weak on the affected side. In only one case did we find any adventitious sounds limited to the affected side, and in this case only at the end of a deep inspiration; but four patients had slight general bronchitis when examined. The position of the heart's apex beat was noted in twenty of the cases equally divided between the right and left empyemata. It was found to be close to the left nipple line in 17 cases. In 2 cases of left empyema the apex beat was one inch and three-quarters of an inch respectively outside the left nipple line, probably from imperfect re-expansion of the left lung. In 1 case of right empyema the apex beat was three-quarters of an inch to the left of the left nipple line, presumably the result of adhesions formed before the pleura was drained, for imperfect re-expansion of the right lung would cause the position of the beat to be moved to the right. The altered position of the heart's apex and the scar left by the operation were the only abnormal physical signs that we could discover in the last-mentioned case. In 2 cases the impulse was noted to be in the fourth intercostal space, in 15 it was in the fifth interspace; in some the position could not be defined. The lowest and most external point at which the heart's pulsation could be felt has been taken as the position of the apex beat. The result points to good recovery of the lung in nearly all the cases. The completeness of the recovery is very surprising when we consider how severely ill a child generally is before operation, how profuse is the discharge of pus after operation, and to what an extent the physical signs are altered even when the wound has healed. When discharged from hospital deformity and impaired movement of the chest and dulness and weakness of breath sounds are generally quite distinct; but in the majority of our cases these physical signs of disease have become either very slight or quite absent with the lapse of time—in no fewer than seven the presence of the scar, with a slight alteration in the percussion note in its immediate neighbourhood, being the only remaining evidence of the disease. In many cases the healthy appearance of the children was very striking, especially when it is considered under what unfavourable hygienic conditions the poor of the East-end of London, who constitute the bulk of our cases, live; and hardly any of them could be described as unhealthy looking. In only one case were there any signs suggestive of phthisis, and in this case the signs were not sufficient to warrant more than a suspicion of that disease, while the general condition of the patient was decidedly opposed to it. We did not discover any evidence of lardaceous disease, but the urine was examined in only a few cases. There was no œdema in any case. To save repetition we give full notes of only 3 cases, which may each be taken as a type of a group, although the divisions between the groups are not very sharply defined. The case of A. T—— stands by itself as the least satisfactory of all. The terms "slight" and "slightly" are several times used in this paper. They have been applied only to conditions in which the alteration from the normal or the difference between the physical signs on the two sides was so little that careful examination was required to detect it, and that in ordinary clinical work it would hardly have been noticed.

Case 1.—W. C——, aged two years, admitted May 11th, 1889, with a history of three weeks' illness. Causation of empyema doubtful. A history of phthisis on mother's side. There were signs of a pleural effusion on the left side. May 14th, chest aspirated, and eight ounces of pus withdrawn. On May 17th the chest was opened, a portion of a rib being resected and the pleura drained. The patient left the hospital on June 4th. Condition on May 15th, 1891, two years after the operation:—Occasional cough, but not short of breath, and able to run well. He holds himself erect as he walks. Appetite good; well nourished. The spine is straight, and the shoulders are on the same level. Chest of good shape; no flattening. Movements equal on the two sides. Percussion note everywhere equal on the two sides, except in the neighbourhood of the scar, where it is slightly higher pitched. Breath sounds equally good on both sides; no adventitious sounds. Apices of lungs normal. Cardiac impulse felt in fifth space as far as a quarter of an inch outside the left nipple line. Liver felt just below the edge of the ribs; spleen not felt; fingers not clubbed; no œdema.

The following 6 cases closely resemble the above, and only the points in which they differ from it will be mentioned:—

Case 2.—W. W——, aged two years and eight months at time of operation. Examined sixteen months later. Chest rather barrel shaped; liver felt three fingers' breadth below the ribs.

Case 3.—P. B——, aged three years and six months at time of operation. Examined two years afterwards.

Case 4.—G. B——, aged seven years at time of operation. Examined four years and nine months afterwards. History of occasional pain in right side passing to umbilical region.

Case 5.—L. A——, aged eight years at date of operation. Examined seven years later.

Case 6.—J. J——, aged nine years at time of operation. Examined seven years later.

Case 7.—J. A——, aged two years and six months at time of operation. Examined three years and nine months later. Said to have pain occasionally and frequent cough.

In the following 13 cases the recovery is not quite so perfect, all showing either slight deformity, dulness, or weakness of breath sounds.

Case 8.—H. J——, aged three years when admitted on Feb. 13th, 1888, with signs of pleural effusion on the left side. "Very scrofulous-looking, with clubbed fingers." Feb. 17th: A part of seventh rib in posterior axillary line excised, and about six ounces of thick greenish pus removed.—April 29th: "Discharged with contraction of left side." Examined three years afterwards, and the following note made:—The mother says that the wound did not heal until two months after leaving the hospital, but child well now in every way. Looks very well; face a good colour; fingers not clubbed; no œdema. Spine a little curved, with convexity to the left in the dorsal region. Shoulders and scapulæ on the same level on the two sides. Some very slight flattening at the left anterior axillary base. Movements of chest equal on both sides behind, in front rather better on the right side. At extreme left base and near the scar the percussion note is very slightly higher pitched, with rather weak breath sounds; Elsewhere percussion note and breath sounds perfectly good. Apices normal. Cardiac impulse felt out as far as a quarter of an inch to the left of the left nipple line. Systolic murmur at apex. Liver and spleen not felt.

The following 12 cases resemble Case 8 and, as before, only the differences will be mentioned:—

Case 9.—A. E——, aged two years when admitted for operation. Examined four years and a half later. Systolic murmur at apex, probably hæmic; no flattening of chest.

Case 10.—B. F——, aged eight years when admitted for

operation. Examined nearly five years later. At right apex in front bronchial breathing and slight increase of vocal resonance; general condition very good; no flattening of chest walls.

Case 11.—A. M——, aged two years when admitted for operation. Wound continued to discharge for eight months according to mother. Examined two years later. Heart normal.

Case 12.—S. W——, aged two years when admitted for operation. Examined nearly two years later. Considerable prominence in left mammary region, but spine nearly straight; movements and percussion note the same on the two sides; heart normal.

Case 13.—C. A——, aged nine years when admitted for operation. Examined six months afterwards. No flattening of chest. Heart normal.

Case 14.—J. B——, aged seven years when admitted for operation. Examined ten months afterwards. No flattening of chest. Heart normal.

Case 15.—W. S——, aged four years and six months when admitted for operation. Examined seven months afterwards. No flattening of chest. Heart normal.

Case 16.—R. H——, aged two years when admitted for operation. Examined seven months later. Heart normal.

Case 17.—F. T——, aged six years when admitted for operation. Examined one year and nine months later. A few small râles are heard at the left base at the end of a deep inspiration. Heart normal.

Case 18.—A. P——, aged two years and six months when admitted for operation. Examined four years and three months later. No dulness. Liver three fingers' breadth below edge of ribs. Heart normal.

Case 19.—A. H——, aged five years and six months when admitted for operation. Examined eleven months later. Cough troublesome. Has enlarged tonsils and granular pharyngitis, which probably explain the cough. No flattening of chest. Heart normal.

Case 20.—C. D——, aged six years when admitted for operation. Examined one year and six months later. Said to be in better health than before illness. Front of chest rather flat. Small râles at both bases. Heart normal.

In the three cases which form the next group the permanent alteration in the physical signs is rather greater, although the general condition is good in all.

Case 21.—F. C——, aged thirteen years, was admitted on Nov. 5th, 1888, with a history of pain in the right side for two months, and signs of a pleural effusion on the right side. No family history of phthisis. On Nov. 12th aspiration was done and six ounces of straw-coloured fluid drawn off. On Dec. 17th twenty-seven ounces of pus were withdrawn. On Jan. 4th, 1889, the chest was opened, a portion of the seventh rib being resected at the angle of the scapula. On Feb. 12th the patient was sent to a convalescent home; there was still a fair amount of pus discharging from the wound. In June, 1890, the wound was still discharging, but, after scraping the sinus and removing a piece of necrosed bone from one of the cut ends of rib, it healed; it had been discharging about eighteen months. The patient in May, 1891, about two years and four months after operation, looked very well. Nutrition good. No cough, pain or dyspnœa. Hands and feet always cold, but said to have been the same before the illness; fingers not clubbed. Slight convexity of dorsal spine to left. Right scapula and shoulder rather lower than left. Respiratory movements better on left side than on right. Veins slightly dilated on right side. Slight flattening on right front. Percussion note dull, with increase of resistance, at right base from level of scar downwards; diminished resonance in right axilla; the same on the two sides in other situations. Breath sounds weaker over dull area and over whole right front. No adventitious sounds. Heart's apex in fifth space just internal to nipple line. No murmur.

Case 22.—M. B——, aged six years at the time of operation. Examined two years and three months afterwards. Spine straight; slight tendency to pigeon breast; some general bronchitis. In other respects the physical signs are much the same as in Case 22.

Case 23.—R. R——, aged seven years, when admitted for operation. Examined two years and six months later. Spine straight. Very slight flattening at right front. Dulness at extreme posterior base on right side with weak breath sounds; dulness at right axillary base, with weak breath sounds and prolonged expiration. Systolic murmur at apex and base of heart, probably hæmic.

Case 24.—A. T——, aged four years at time of operation. She had scarlet fever shortly after leaving the hospital, and the wound did not heal for about two years. Examined two years and nine months after operation. Coughs a great deal and brings up a large quantity of phlegm; no hæmoptysis, but sometimes epistaxis. Breath very short, and patient cannot walk fast. Losing flesh. General nutrition very fair. Spine straight. A little flattening at left anterior axillary base. Left shoulder rather lower than right. Movement of left side of chest a good deal diminished. At the left base the resonance is diminished and resistance increased from angle of scapula downwards; at extreme base quite dull. Respiration weak all over the left base, with râles. In the axilla the breath sounds are weak and bronchial, almost tubular; apices normal. Cardiac impulse in fifth space half an inch outside left nipple line; double thrill felt at apex; double murmur, loudest at apex, but heard all over the left side of the chest. No history of rheumatism or chorea could be obtained. Spleen one finger's breadth and liver two fingers' breadth below edge of ribs. No œdema. Fingers rather clubbed.

PSYCHO-THERAPEUTICS.

A SCIENTIFIC FRAGMENT.

BY WM. DALE, M.D. LOND.

"As the state of the mind is capable of producing a disease another state of it may effect a cure" (John Hunter). In this article I wish to consider, imperfectly though it must be, these questions—(1) The influence of the mind on the body in producing diseases; but especially (2) the influence of the mind in curing or removing diseases. The subject is doubtless beset by difficulties, among which perhaps the most formidable are, first, that we are obliged to depend for information on the subjective feelings of the sufferers themselves; secondly, on the often very garbled and misleading statements made respecting these feelings. The gist of our subject is contained in these lines of Churchill:—

> "The safest way to health, say what you will,
> Is never to suppose we shall be ill;
> Most of those ills we poor mortals know
> From doctors and imagination flow."

The influence of the mind on the body is well burlesqued in the following story. Sir T. Moore being visited by Erasmus, the former endeavoured to convert him to a belief of the real presence in the Eucharist, and assured him that if he would *only believe* he would be satisfied of its truth by unquestionable evidence. On leaving Moore's home he borrowed his pony, and finding it useful did not incline to return it, but sent certain Latin stanzas as under:

> "Quod mihi dixisti,
> De corpore Christi,
> Crede quod edis, et edis;
> Sic tibi rescribo
> De tuo palfride,
> Crede quod habes, et habes."

Which have been thus freely translated:—

> "Remember you told me
> Believe and you'll see,
> Believe it a body and a body 'twill be;
> So should you tire walking
> This hot summer-tide,
> Believe your staff's Dobbin
> And straightway you'll ride."

Not only does the imagination play us strange tricks, but our affections and passions are liable to become inordinate and abnormal, and they lead to many bodily disorders. Not only may this be said of fear, anger, revenge, grief &c., but also of love, hope, joy, friendship &c.; so that even our enjoyments and duties as well as our vices may become "scorpions to whip and sting us." The poets have not overlooked these facts, as in the following examples:

> "She never told her love,
> But let concealment, like a worm i' th' bud,
> Feed upon her damask cheek: she pined in thought,
> And, with a green and yellow melancholy,
> She sat, like Patience on a monument
> Smiling at grief."—*Shakespeare.*

> "Dum spectant oculi læsos lædantur,
> Multique corporibus transitione nocent."

Or thus in English :

"Viewing sore eyes, eyes to be sore are brought,
And many ills are by transition caught."

"For deadly fear can Time outgo,
And blanch at once the hair."

"O how fear did make her colour rise!
First red as roses that on lawn we lay,
Then white as lawn the roses took away."

I hold the views of Mr. Herbert Spencer, who believes in "the constant coöperation of all the leading nervous centres in every thought and emotion," and therefore, in my judgment, our division of the mind into various faculties or powers is merely to facilitate our conception and study of mental acts—or, more strictly speaking, is an attempt to analyse the thing which is an entirety, and to divide that which is indivisible. According to this view an act of the intellect or an act, say, of volition is in either case an act of the whole mind, and we love or fear &c. with the whole mind, not with a single part or parts of it; and in this sense in what follows I shall endeavour to consider the mind's action on the body in the production and in the removal of diseases. There are very many instances of the hair turning grey or white in a few hours, through sudden fright or grief, but on these I shall not dwell, since I am not aware that we possess any mental influence that can undo this misfortune; for we know of no other power whatever that can make "one hair white or black."

Sir Thomas Watson says that diabetes may be caused by distress or anxiety, and Dr. Copland states that mental exertion and the depressing passions may give rise to the disease. It has also been observed that in families where the disease is hereditary, if one member of the family should suffer from it fear will hasten its onset in other members. The following statements concerning the influence of anxiety and disappointment on the inhabitants of France during the Franco-Prussian war are on record. "A young lady was standing with her father at the window when the Prussian soldiers came down the *tranchée* and she was seized with shivering; her father, who could feel her trembling, said—'You need not be frightened; they will not hurt you.' But she had received a shock from which she became quite blanched and lost her sleep and flesh, and she has never been able to keep her feet warm from that day, now two years since." In a letter to THE LANCET, dated June 21st, 1871, the writer states: "The true hope of the Parisians, which they fondly cherished, and which in a great measure kept them alive during the siege, was most cruelly blighted—and you may imagine their disappointment when the capitulation of the city was announced; the mental shock to some was such that they almost lost their reason. But the most remarkable effect of the siege was the aged appearance of some of the inhabitants. Men and women alike seemed to have passed over at least ten years of their existence in half as many months." There are many well-authenticated instances of hydrophobia being produced by fear: for example, "A boy was bitten by another boy in anger. There was no evidence of rabies in the biter, but the boy died. He was seized with hydrophobia forty-eight days after the bite and died in twenty-four hours."[1] It is recorded by Gaubius that "a soldier quarrelled with a woman, who thereupon bit his hand. He was seized with rigor and died." An enraged Italian youth, unable to revenge himself, bit his own hand and was seized with a deadly fear of water, as if bitten by a rabid dog. Malpighi asserts that his own mother died of hydrophobia a few days after being bitten by an angry epileptic. To Carlyle is attributed the saying, "Conscience is very much a matter of the condition of the liver," and at all events one may safely say that bile and bad tempers, or even melancholy, go together. Anxiety and grief, fear and anger will all produce jaundice. So it would seem that mental states are produced by disorders of the liver and disorders of the liver by mental states—they mutually react on each other. Dr. Carpenter remarks that "it is perhaps not an ill-founded opinion that melancholy and jealousy have a tendency to increase the quantity and to vitiate the quality of the biliary fluid;" and that "it is certain the indulgence of those feelings produces a decidedly morbific effect by disordering the digestive processes, and thus reacts upon the nervous system by impairing its healthy nutrition." The influence of sudden fright in checking the secretion of bile and so occasioning jaundice is adduced by Bichat as a striking proof of the connexion of mental states and the secreting organs; and so Juvenal writes, "Quid referam quantâ succum jecur aident via." Dr. Murchison observes that "there is good evidence that nervous influences may not only cause functional derangement but cure structural disease of the liver." Diseases of the spleen are also said to have been caused by certain states of the mind, as "thought, anger, care, sorrow, fear, or grief," or worry about many matters. The ancients believed that anger and desire resided in the gall, fear in the heart, and joy in the spleen, so the poet—

Cor ardet, pulmo loquitur, fel commovet iras
Splen ridere facit, cogit amore jecur.

Excessive joy as well as excessive grief may even cause death. Wives on receiving their husbands back safe and sound, who had been reported as certainly lost, mothers on embracing their sons who were thought to be dead, poets on coming to sudden honour and fame, and prisoners on being pardoned or suddenly released, have died from the shock of sudden joy. Rheumatism has been produced by fright, and this ofttimes seems to be the only exciting cause; and gout is proverbially dependent on mental influences; fretting, worry, domestic vexation, joy, anger, terror and excessive mental strain are all exciting causes of this disease.

Sydenham observes that "melancholy is pre-eminently the inseparable companion of gout. Hence, those who are liable to it are so wont to tire and overwhelm the animal spirits by long and deep thought, that excessive exertion of this sort, even without the artificial aid of reading, makes the proper preservation of the economy of the body an impossibility, for which reason (as it seems to me) gout rarely attacks fools. Those who choose may except the present writer." Joy, grief, or disappointment will, according to many writers, occasion fever. The following instances may be named. Dr. Rush observes that "the attendants upon the sick in bilious yellow fever in Philadelphia in 1798 were materially influenced by the prospect of the patient's recovery; so long as there was hope they often escaped, but when hope was extinguished they were frequently attacked by the disease." Dr. Jackson states that "the garrisons of Savannah and York Town remained healthy so long as these towns were besieged, while Savannah became affected with fever when the French and American armies retreated from it, and York Town when it capitulated. In both instances the mental tone of the inhabitants ceased to be wholesomely maintained; joy in the former did not prevent the deleterious influence of their action; and grief and disappointment in the latter produced their natural fruits."

Sir Samuel Baker, in his "Albert Nyanza," after describing the symptoms of the fever which prevailed and proved frequently fatal in Africa, and was of an intermittent type, observes that "any severe passion of the mind, such as grief or anger is almost certain to be succeeded by fever in this country, just as full occupation of the mind was found to act as a prophylactic against it." Several examples of the power of the will over the bodily functions are recorded—e.g., of a man named by Dr. Darwin who could stop the motion of his heart when he pleased and of another who could by voluntary effort cause the action of the bowels at any time in half an hour.[2] Colonel Townsend's case, so often quoted, is doubtless very remarkable. It is said of him that he possessed the remarkable facility or power of throwing himself into a trance at pleasure. "The heart apparently ceased to throb at his bidding, respiration seemed to be at an end, his whole frame assumed the icy chill and rigidity of death..... his mind during the trance was as utterly devoid of consciousness as his body of animation. In this state he would remain for hours, when these singular phenomena wore away, and he returned to his usual condition." The celebrated John Hunter had great will power. Speaking of animal magnetism, to which his attention had been drawn, he observes: "If any person is affected by it, it must be by the imagination being worked up by the attention to the part expected to be affected." In this belief he went to be magnetised and observes, "When the magnetiser began his operations and informed me that I should feel it at first at the root of the nails of that hand nearest the apparatus I fixed my attention on my great toe, where I was wishing to have an attack (fit of the gout). Whenever I found myself attending to his tricks I fell to work with my great toe—working it about &c.,—by which means I prevented it having any effect upon me." During an alarming attack of spasm, attended by unusual depression of

[1] THE LANCET, July 14th, 1860

[2] Philosophical Transactions, p. 39.

the heart's action, Hunter is said to have been able to keep up the respiration, as he thought, by a voluntary effort; but I am disposed to think that, whatever may have been the state of the heart at the time the respiratory centres were unaffected, and therefore he breathed naturally, and not by any voluntary action he himself put forth. The case of Colonel Townsend is singular in many respects, and among others that he is said to have discovered by accident the power he had to suspend the action of the heart; it is probable, therefore, that the cardiac suspension he could produce voluntarily was the result of some peculiarly nervous state, which by repetition had previously become automatic; and this same feeling or sensation rendered it possible for him at times to precipitate the act. Colonel Townsend's cases teach us nothing—merely exciting our wonder; but Hunter's power of attention, as described in his mode of dealing with the magnetised, really contains, as has been said, "the gist of all that has been written since on the influence of expectant attention on the imagination." Shakespeare has two lines in "King John" of gravest import:—

> "How oft the sight of means to do ill deeds
> Makes deeds ill done."

And on the ludicrous side of the thought we have the following experience of John Hunter. "I went," he says, "to see Mrs. Siddons' acting. I had full conviction that I should be very much affected, but unfortunately I had not put my handkerchief in my pocket, and the distress I was in for want of that requisite when one is crying, and a kind of fear I should cry, stopped up every tear, and I was even ashamed I did not, or could not, cry."

I next notice certain cases of disease which go under general and arbitrary names. Hysteria, which doubtless often proceeds from some anomalous action of the mind and feelings, but which likewise is often mere perverseness and little understood; disappointed love, or ambition, or social hopes and expectations, or inordinate passions or desires in any direction, and an inordinate craving for sympathy or undue attention; and, in some instances, disinclination for any kind of employment or even amusement, are among the most prominent exciting causes of hysteria. In other instances in connexion with it, and as a part of this disease, we meet with deception and cunning without apparent purpose or end; but, I conceive, for the most part to arouse sympathy or to avoid work or exertion. A case came under my notice some years ago where a young woman lay in bed two days apparently in a state of deep insensibility, insomuch that the medical man in attendance thought she had serious brain disease; but on being freely doused with cold water over the head and face she speedily came to her senses and called out, "I'll tell my father!" In another case, that of a lady's maid seen by a medical friend of mine, to whom he was called at midnight, the free use of cold water brought her out of a severe fit in which she was violently struggling, and jumping up she cried out in a rage, addressing the medical attendant, "You're a devil!" In another case the patient was a half drunken woman who had fallen down in a fit opposite my house, and by her struggles was exciting much sympathy, but on my pouring over her face a can of cold water she leaped up and said, "You're Dr. ——; give us a drink." Other cases yet more strange would seem to be produced for some purpose or from some morbid feeling by imitation. Thus the hip, the knee, the ankle, the shoulder, the elbows, the wrist or the fingers may become immovable and highly painful, as if from severe disease of the joints; yet, as the subsequent history has shown, they have become instantly well again under some emotional or impulsive effort of the patient, and that to the general surprise of experienced medical attendants. "Expectation of the action of a remedy causes us to experience its action beforehand."—Umzer. "I am confident that I can fix my attention on any part until I have a sensation in that part."—John Hunter.

In the preceding remarks I have given numerous instances in proof of the influence of the mind in producing various diseases of the body; and I have now to show its power, and the limits of that power, as a psycho-therapeutic agent. I shall exclude from consideration mesmerism, or animal magnetism, as it is designated, and also Braidism, another form of animal magnetism, as they were employed by Dr. Elliotson and Mr. Braid as agents in the treatment of disease; for their effects even in the hands of these and other able observers were for the most part uncertain, often illusory, and always more or less mysterious. I shall also pass over the wonderful stories which are told concerning "tractors" (pieces of wood or metal &c.) which, after having been employed by certain enthusiasts in hospital practice, have long been laid aside in England as, if not useless, at least as quite undeserving the praise once bestowed upon them. I shall deal in the same manner with the administration of "bread pills" and other inert substances, whilst assuring the patient that they are new and most powerful remedies, inasmuch as, requiring to be used both on the part of the patient and the physician with much mystery, untruth and quackery, the whole procedure is repugnant to every right and honest feeling.[3] These things being excluded from consideration, either as unworthy or uncertain methods of treatment in disease, we find that the influence of the mind in curing bodily ailments is extremely limited. I shall now proceed to illustrate this influence by examples, seek to define its limits and inquire to what extent it may be legitimately employed.

"A young lady, in other respects healthy, had gastric nerves so wayward that they would permit only a small amount of food to remain on the stomach. This condition produced great debility and inconvenience. Her physician told her that she might by a strong mental effort free herself from the ailment. She tried her best, but failed. It became apparent that she did not possess sufficient will power for the task. The physician, therefore, decided to assist the will by inducing strong emotion with respect to the ailment, and this he effected in the following manner. Going to the future husband of the lady he urged him to inform her that their union could not take place until she was cured. The time fixed for the marriage was close at hand, and the shock of such news had an immediately beneficial effect. Her gastric nerves began to resume their normal functions from the moment of that interview." "The wife of a scientific man was seized with what is called hysterical paralysis of the lower limbs. She was informed that her inability to walk was not the result of any organic change, but merely of nervous debility, and she received the usual routine advice—'that she must fight against her feelings, and make constant efforts to overcome the paralysis by force of will.' She followed this advice for a long time, but getting gradually worse she gave up all attempts at walking and resigned herself to the ignominy of a Bath chair. One summer's day she was left on the seashore by her husband, who went a short distance for a newspaper. During his absence a half-intoxicated Highlander approached the lady and threatened to kiss her. In terror she jumped from the Bath chair and made off in search of her husband. From the date of that incident she gradually recovered the power of locomotion."[4] "A patient suffering from hypochondriasis, who thought he was dying from liver disease, upon receiving information of the death of his brother, who actually died of a scirrhous liver, immediately staggered and fell down, crying out that he was dead. Dr. Crawford of Baltimore being sent for, he immediately attended, and on being informed of the notion which had seized the hypochondriac exclaimed: 'Oh, yes, the gentleman is certainly dead and it is more than probable his liver was the death of him. However, to ascertain the fact, I will hasten to cut him open before putrefaction takes place.' He called for a carving knife, and, whetting it as a butcher would when he proceeds to open a dead calf, he stepped up to him and began to open his waistcoat. The hypochondriac became so terribly frightened that he leaped up with the agility of a rabbit, and, crying out, 'Murder! murder! murder!' ran off with a speed that would have defied a score of doctors to catch him. After running a considerable distance, until he was almost exhausted, he halted, and not finding the doctor at his heels soon became composed. From that period this gentleman was never known to complain of his liver, nor had he for more than twenty years afterwards any symptoms of this disease."

Hydrophobia, it is thought, may be prevented or cured by a firm determination to resist it. A Mr. C—— was severely bitten by a cat which died the same day hydrophobic. He appears to have thought little of the circumstance, and was certainly not nervous or imaginative in regard to it. Three months, however, after he had received the wound he felt one morning great pain in the arm accompanied by extreme thirst. He called for a glass of water. The sequel will be best told in his own words: "At the instant that I was about to raise the tumbler to my lips a strong spasm shot across my throat. Immediately the terrible conviction came to my mind that I was about to fall a victim to hydrophobia—

[3] Another "ism"—hypnotism—is on its trial, but I fear nothing will be gained in medicine by its employment.

[4] The Nineteenth Century, November, 1887.

the consequence of the bite that I had received from the cat. The agony of mind I endured for one hour is indescribable; the contemplation of such a horrible death as that from hydrophobia was almost insupportable; the torments of hell could not have surpassed what I suffered. The pain, which had first commenced in the hand, passed up to the elbow, and thence to the shoulder, threatening to extend. I felt all human aid was useless, and I believed that I must die. At length I began to reflect on my condition. I said to myself either I shall die or I shall not; if I do it will only be a similar fate which many have suffered and many more must suffer, and I must bear it like a man; if, on the other hand, there is any hope of my life, my only chance is in summoning my utmost resolution, defying the attack and exerting every effort of my mind. Accordingly, feeling that physical as well as mental exertion was necessary, I took my gun, shouldered it, and went out for the purpose of shooting, my arm aching the while intolerably. I met with no sport; but I walked the whole afternoon, exerting at every step I went a strong mental effort against the disease. When I returned to the house I was decidedly better; I was able to eat some dinner, and drank water as usual. The next morning the aching pain had gone down to my elbow; the following day it went down to my wrist, and the third day it left me altogether. I mentioned the circumstance to Dr. Kinglake, and he said he certainly considered that I had had an attack of hydrophobia, which would possibly have proved fatal had I not struggled against it by a strong effort of mind." If it be true that hydrophobia, or symptoms closely resembling it, may be produced by fear and excitement after being bitten by an animal, rabid or otherwise, and that by a strong mental effort these symptoms may be subdued, as in the case which has just been referred to, it is most important that the fact should be generally known. There is good evidence to show that this is by no means an isolated case, and the physician should be careful at least not to encourage the idea of hydrophobia in a patient who has been bitten by a suspected animal; but indeed it would be well for him rather to scout the notion so that the fears of his patient may be as far as possible allayed. One case is recorded in which a man, who had been bitten by a dog, through fear remained in bed for several days, believing he was the victim of hydrophobia, but he became speedily well on being told by his physician that hydrophobia caused death much within the time he had already remained in his bed. "If it were understood," says Dr. Spitzka, "that fear and expectant attention may not only develop serious nervous symptoms, but actually cause death, many who are threatened with hydrophobia would cultivate healthful self-control. ..... A number of cases are on record in which patients suffering from the most agonising symptoms of rabies recovered on hearing that the dog which bit them was alive and well."

Hysteria is evidently a disease over which the mind has much power; hence in many phases of this malady it has been thought a sufficient explanation of the symptoms to say "she won't will." The following example is recorded by Mr. Skey, late surgeon to St. Bartholomew's Hospital: "A young lady of sixteen, who for many months had been suffering from an inversion of the left foot, which was twisted at right angles with the other, was treated by orthopædic surgeons with an elaborate apparatus of splints. Neither they nor Mr. Skey (though he recognised the nature of the affection) succeeded in curing it. Psychical agents, however, effected a cure in a few minutes. She willed to use her foot like other people, and she did. She accompanied her family to a ball, her foot as she entered the ball-room being not yet restored to its normal position. She was invited to dance, and under this novel excitement she stood up; and to the astonishment of her family she danced the whole evening, having almost suddenly recovered the healthy muscular action of the limb. She came to see me," adds Mr. Skey, "two days afterwards. She walked perfectly well into my room, and paced the room backwards and forwards with great delight. The actions of the limb were thoroughly restored, and all trace of the previous malady had disappeared." The good effects of a resolute bearing on the part of the physician and the free use of cold water in hysterical fits have already been mentioned. Another case comes vividly before me, that of a young woman who, as I entered the house, having been hastily summoned, was said to be dying from some imaginary swelling of the throat. In this case also a firm demeanour and a plentiful dousing with cold water quickly effected a cure, though the doctor was said to be cruel and unfeeling.

Faith and hope are doubtless valuable adjuncts in the treatment of disease. Hence besides the many well-authenticated cures effected by visiting religious houses, the shrines of saints, strong faith in the prayers of holy men and women, relics, holy water, charms &c., there is every reason to believe that the physician who by his personal bearing and firmness gains the entire confidence of the patient has an infinitely better chance in the treatment of disease than one whose demeanour and character fail to impress him favourably. The above instances must suffice to illustrate the subject of psycho-therapeutics. Many more might be given, but they would be similar in character. On considering the whole subject I think it must be admitted that while the influence of the mind in the causation of diseases is very great, its influence in curing diseases, or the use the physician can make of it for this purpose, is very small and limited. Fear, like mesmerism or tractorism, can very rarely be resorted to, for it has been well observed, "Who can calculate the effects of fear; and, consequently, who would dare to make use of it as a curative agent?" For example, it is possible that a rough intoxicated Highlander may cure a lady of hysterical paralysis; the shock of a railway accident stave off an attack of rheumatic fever, as it is said to have done in one instance, or the threat to dissect a hypochondriac perform a cure. But what practical use can be made of such knowledge? It appears to me, then, that the sum total of what can be done by psycho-therapeutics must be effected by a firm self-reliant bearing on the part of the physician in dealing with cases of hysteria and nervous diseases generally. I have shown already that many hysterical disorders, and even hydrophobia itself, may be cured by encouraging the patient to exert a strong determination (volition) to conquer his disease. Faith and hope too may be stimulated in the sick; this the physician can do, not by inducing them to visit the shrine of a saint or exciting superstitious feelings within them, but by his mode of addressing his patients in the hope and confidence which he endeavours to inspire and in the removal of everything calculated to depress them. One of our noblest poets has said,

> "Mirth, music, friendship, love's propitious smile
> Chase every care."

And to whatever extent one may be disposed to discount the saying of the poet I think that the influence of music has not been utilised in the treatment of disease as it might have been. Whoever has visited the theatre or the opera must be familiar with the soothing and generally pleasant influence that music possesses, and all the more so if some contrivance has been made so as to have the musicians out of sight and that the music may sound as if at a distance; the distant sound of bells, of a waterfall or of singing is alike pleasant and soothing, and all the more so if it be heard at night or in quiet places which invite to meditation. An ancient writer says of music: "It makes a child quiet; the nurse's song, and many times the sound of a trumpet on a sudden, bells ringing, a carman's whistle, or a boy singing some ballad tune early in the street, alters, revives, recreates a restless patient that cannot sleep in the night."[5]

I am persuaded that in some form and in suitable cases, of which the physician would be the best judge, music might be made more serviceable in treatment, provided it were judiciously employed and kept from assuming the garb of quackery or mystery, and in this manner becoming ridiculous. Music was employed, as we know, so far back as the days of the first Israelitish king, for the Scriptures state: "When the evil spirit from God was upon Saul, David took an harp and played with his hand; so Saul was refreshed and was well, and the evil spirit departed from him." It is strange, therefore, that in this day it has been so greatly neglected. There is an article in a periodical of the day on "Rest of Nerves," and among other means the writer advises men who are harassed with many business or other cares in this busy worrying age to rest in bed, at least one day in the week, that the overworked, jaded nervous system may be refreshed and recuperated—and the advice is sound and judicious, although it may perhaps seem absurd and a mere jest to the healthy and vigorous. This plan, however, is only suggested by the writer as a preventive against the evil effects of the worry and cares of business or the bustle of life in these days; but the mind has many other things to bear besides these, which, I fear, neither one day's rest in the week in bed, or even two, will

[5] The influence of "sweet sounds," or, in other words, of music, is now being tried for certain diseases in some of our large hospitals.

help us to sustain with fortitude and calmness. In that very learned and witty book, "The Anatomy of Melancholy," the writer, quoting from Roger Bacon on the way to prevent the ill effects of mental troubles on the body, observes: "If it be any disgrace, abuse, temporal loss, calumny, death of friends, imprisonment, banishment, be not troubled with it, do not fear, be not angry, grieve not at it, but with all courage sustain it. If it be sickness, ill success, or any adversary that hath caused it, oppose an invincible courage, fortify thyself by God's word, or otherwise, set prosperity against adversity (as we refresh our eyes by seeing some pleasant meadow, fountain, picture, or the like), recreate thy mind by some contrary object, with some more pleasing meditation divert thy thoughts. A philosopher was bitten by a mad dog, and as the nature of that disease is to abhor all water and liquid things and to call up the picture of a dog before those affected by it, he went for all this reluctantly to the bath, and seeing there (as he thought) in the water the picture of a dog with reason overcame the conceit—*quid cani cum balneo*. What should a dog do in a bath? A mere conceit." It appears then finally that Faith and Hope are the two great principles which the physician must encourage or seek to evoke in his patient. The diseases to which man is liable may be looked upon as so many enemies which lay siege to the citadel of his life, and often he is so fiercely assailed by them that he finds no help or defence in himself; and it is then that the physician, coming to his rescue with the powerful allies, Faith and Hope, may perchance create within him a courage which will enable him to make, at least, a brave stand against his foes; and he who expects more than this from the influence of the mind in the removal of bodily diseases will, I think, be disappointed.

Bishop's Teignton.

GUNSHOT INJURIES TO THE EYE: THE POSSIBILITY OF THEIR MORE CONSERVATIVE TREATMENT.

BY GEORGE FERDINANDS, M.D., C.M. ABERD.

THE shooting season invariably confronts us with the *pros* and *cons* of enucleation by its presentation of cases where doubt is entertained whether a foreign body exists in the eye or whether the injury sustained by that organ is sufficient to demand its removal. Professor Theodor Leber, in his recent address before the Ophthalmological Society, very lucidly demonstrated how different chemical substances seem to possess different pus-producing qualities depending upon the amount of irritability each was capable of producing. We are told that "purulent inflammation set up by the action of chemical substances has not the same power of extension as that due to the action of microbes." This is an important statement, and its importance is enhanced, since clinical observation strongly supports Professor Leber in his further remark that "the inflammation caused by chemical agents remains more or less limited to the affected area." These facts, viewed in conjunction with the theory of germ transmission along the lymph channels of the optic nerves, undoubtedly demand a reconsideration of the bases generally accepted as justifying enucleation. Especially is this so in those cases where only an aseptic inflammation may with reasonable groun is be anticipated. Such reconsideration may lead to modified measures in a large proportion of gunshot injuries to the eye. A shot is a comparatively aseptic body, and usually produces little disturbance when lodged in the eyeball.[1] In these cases the period of observation might with safety be prolonged. In fact, the hasty removal of eyes thus injured is to be deprecated. An attempt should be first made to extract the foreign body from the exudation around, from which, as suggested by Professor Leber, cultivations may be made, to discover the septic or aseptic nature of the injury. Another advantage from delay may be gained in cases where doubt exists as to the presence of a shot in the eye. The following instances which have come under my own observation may exemplify this.

CASE 1.—R. B——, in August last, had his left eye struck by a spent shot. The case was seen by me a week after the accident. The upper eyelid was slightly swollen and ecchymosed, and right in the centre, nearer the nasal end of the lid, was a well-marked wound, almost healed. It was difficult to judge whether the wound had extended to the whole depth of the lid. Beyond these, there were no perceptible signs of external injury. V. = barely $\frac{6}{18}$, and on examination the fundus showed a large subretinal hæmorrhagic patch below the macula lutea—i.e., just on a line with the wound on the eyelid. The appearance the hæmorrhage presented was certainly suspicious, for it consisted of a dark central spot, slightly elevated, and surrounded by an irregular zone of a lighter shade. The vitreous near the hæmorrhage was slightly hazy. No other evidence of internal injury could be noticed in spite of careful examination, especially of that part of the fundus lying adjacent to the injured eyelid. The hæmorrhage retained its character and size for over three weeks, and then suddenly became absorbed in a few days, leaving only pigmentary traces, and when the case was last seen V. = $\frac{6}{5}$.

CASE 2.—A. M—— was also accidentally shot just below the left eye, one centimetre from the lower lid, where there was a well-marked punctured wound, almost hidden by the swelling externally; the appearance round the eye was that of a typical "black eye." On careful palpation, rendered difficult by the swelling, no foreign body could be felt beneath the skin. The eyelids were with difficulty separated, and the external examination of the eyeball revealed only slight subconjunctival hæmorrhage towards the outer side. The examination of the fundus proved difficult, especially as the pupil was small; but a distinct subretinal hæmorrhage could be made out a little way below the disc. Ice and atropine were ordered. After three days the swelling subsided considerably, and a thorough examination of the fundus revealed only the single hæmorrhage seen before; it presented, however, the same peculiar appearance of a dark, jagged central spot and a lighter zone around it. On palpation over the wound a week after the accident the presence of a pellet embedded deep beneath the skin in the subcutaneous tissue could with a little trouble be felt. This discovery removed all doubt as to there being any foreign body in the eye itself. The hæmorrhage rapidly diminished in size and density, and a fortnight after the accident vision had improved from the perception of only fingers at 6 ft. to $\frac{6}{12}$.

CASE 3.—I am unfortunately unable to give precise notes of this case. A few years ago I was asked to assist at an enucleation. As far as I can remember, the history of the case was as follows. About a month before the date of operation the patient, while out shooting, was accidentally shot in the face. He distinctly felt something strike the eye. On examination there was either no apparent wound of the eyeball or only a slight abrasion. However, a well-marked hæmorrhage near the disc was easily recognised, looking very much as if a foreign body was lodged in its centre. The case was carefully examined from time to time by two medical men, but the persistence of the hæmorrhage without any apparent diminution of its size or density only served to confirm the suspicions entertained that the foreign body was present; and as the patient and his relatives were anxious about the matter it was decided to remove the eye. This was done, and on examining the eyeball no foreign body was found, neither was there much evidence of any hæmorrhage left.

The first two cases were evidently instances of mere concussion of the eyeball, the hæmorrhage being caused by *contrecoup*. In fact, injury to the fundus by this peculiar phenomenon is by no means uncommon, and is especially noticeable in blows or injuries received over the eyeball. The third case must have been identical with the two former. It may have been a case in which the shot had traversed the eyeball and entered the orbit, but there seems not to have been sufficient evidence to suggest this. The case serves to show how necessary it is that a final examination of the eye should be made immediately before it is excised. Had too precipitous measures been adopted in the first two cases useful eyes would have been unnecessarily sacrificed.

The whole subject is replete with difficulties. Each case has to be treated on its own merits, and consequently depends on the judgment of the surgeon who has had drilled into him all the dangers of sympathetic ophthalmitis, and who naturally resorts as early as possible to extreme radical treatment. It is well, therefore, to remind him that there are

[1] Unfortunately Professor Leber makes no mention of lead.

certain cases which do not require these radical measures, and that they can only be recognised by an extension of the period of observation usually considered necessary in such cases.

Aberdeen.

NOTE ON DIASTASIS THROUGH NECK OF FEMUR.

BY DAVID WALLACE, F.R.C.S. EDIN.

DIASTASIS through the neck of the femur is described as a rare injury in our text-books, and Dr. Hamilton refers to only three problematical examples.[1] In the "Archives of Surgery"[2] the author refers to the detachment of the upper epiphysis of the femur, and specially directs attention to its absence from museum collections, no specimen being extant, and he also refers to the rarity of any clinical descriptions of the injury. Mr. Hutchinson, however, states that he is "confident that it is an accident which is not infrequent." In the first week of April of this year, a few days before I saw Mr. Hutchinson's account of this injury, one of my students asked me to see a case of supposed old-standing dislocation of the hip. On examination of the patient I concluded that it was probably a diastasis through the neck of the femur, not a dislocation at the hip-joint. The history and condition were as follows:—

M. B——, aged eleven years, a girl of good build, tall and strong for her age, was said by her mother to have been a well-nourished child, who walked before she was nine months old. When nine months of age she fell out of her cot, and the mother believes that when falling the right foot caught between the bars, so that the leg was severely twisted. The child cried, and refused to stand up or allow the leg to be moved. There were pain and swelling in the neighbourhood of the hip. Hot fomentations were applied during the first few days, but in the course of two or three weeks (?) a doctor was called in, who said the hip-joint was dislocated, and attempted to reduce it, but failed to do so. Two or three years later the child walked with a distinct halt, and the hip was prominent. At this time the mother showed the girl to a "bonesetter," who tried "to put the bone in," but also failed. The swelling and lameness have persisted until now, but the girl walks, runs, and jumps without any pain as a general rule, although after much romping she now and then complains of pain at the hip. No other injury has been sustained, and there is no history of joint or chest disease in the patient or in other members of the family.

Present state.—The patient complains of no pain or discomfort, but says she is lame and that the "leg comes out at the haunch." She walks with a distinct limp, and when she stands the right foot is observed to be a little more everted than the left, while there are marked drooping and rotation forwards of the right anterior superior iliac spine. The right limb is evidently shorter than the left.

Measurements.—1. From anterior superior iliac spine to internal malleolus: right, 27 in.; left 29¾ in. 2. From anterior superior iliac spine to tip of patella: right, 14 in.; left, 16 in. 3. From tip of trochanter major to external condyle: right, 13¾ in.; left, 14¼ in. Nélaton's line on the right side passes 1½ in. below the tip of the trochanter; on the left side it is normal.

Movements.—The right thigh can be flexed on the abdomen, but not quite so fully as the left. Rotation of the right is greater than the left. Abduction is equal on the two sides. When the right leg is flexed on the thigh and the thigh on the abdomen the trochanter major is felt as a distinct prominence midway between the anterior superior spine of the ilium and the ischial tuberosity, and moves through a much wider radius than the left. No rounded prominence corresponding to the head of the femur can be felt, but there is a distinct mass of bone projecting internally to the trochanter, which moves with the trochanter. (Is it the atrophied head of the femur in an old-standing dislocation, or a short process respresenting the neck thickened by osteophytes?) When rotary movements are carried out a rough grating is felt deeply seated. The right leg is thinner than the left, but is muscular and shows no sign of malnutrition.

From a consideration of the above points in this case I conclude that it is a diastasis of the neck of the femur, chiefly because of—(1) a history of injury at an early age, but subsequently to the child walking; (2) no history or appearance of tuberculous disease; (3) marked displacement of the trochanter major upwards, associated with very free movement and eversion of the foot; and (4) a slight degree of shortening of the femur.

Edinburgh.

[1] Hamilton: Fractures and Dislocations.
[2] Vol. iii., No. 12, April, 1892.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se compare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

A CASE OF SUICIDAL WOUND OF THE THROAT COMPLETELY SEVERING THE LARYNX AND OPENING THE GULLET; SUTURING OF EACH; SURVIVAL DURING SEVERAL HOURS.

(Under the care of Mr. HULKE.)

A POINT of forensic and physiological interest in this remarkable case is the allegation that the patient was able to speak in a whisper so as to be understood by the constable called to him soon after the infliction of the wound, although the upper portion was separated by an interval of several centimetres from the lower part of the larynx and one vocal cord was damaged. Closely questioned on this point, the constable's testimony remained unshaken. The absence of respiratory embarrassment in the presence of the deep retraction of the lower part of the larynx is another notable circumstance. Its probable explanation lies in the free access of air through the widely gaping external wound, the rigidly patent lumen of the severed cricoid cartilage and the diminished call on the lungs in presence of the very great loss of blood, and the deep shock. The insensibility to pain shown by the patient during the examination of his wound and the suturing of the gullet and larynx merits a passing notice; it is a not uncommon circumstance in shock from injuries, and as a matter of common experience it seems to be more pronounced in instances of self-inflicted wounds, where it appears to be largely dependent on the mental condition attending these injuries. That this patient was not suffocated by the copious entrance of blood into the trachea may have been due to the widely gaping external wound affording free outlet for the flowing blood, the external escape of which might have been favoured by his lying on his side. It was remarkable that the great cervical bloodvessels escaped injury, as did also the thyroid gland. The retraction of the trachea towards the chest gives some measure of the longitudinal elastic tension of this tube under normal conditions. Owing to the jagged irregular manner of severance of the larynx and the detachment of small pieces the upper and lower parts could not be everywhere adjusted with perfect accuracy. Stout silk sutures were used for sewing the larynx together, being better able to withstand the great downward pull of the trachea and becoming more slowly disintegrated than catgut, and therefore holding longer.

A. C——, aged twenty-three, was received into Founder ward in the early morning of April 15th, 1891. He had very shortly before been found on the floor of a room with his throat cut. His clothes were soaked with blood, which in small quantity was still trickling from a gash in the front of his throat at the level of the cricoid cartilage. The surface of his body was cold, and had the colour and translucency of white wax. His pulse was scarcely perceptible (it was so small and weak); its beats were 60 per minute; respiration 16 (shallow and noiseless). His face had an anxious expression. He was perfectly conscious. When spoken to he tried to answer; his lips moved, but he was voiceless and no sound was emitted. He had swallowed, we were told, a little brandy-and-water, but most of this had run out through the wound. In the casualty receiving-room a hypodermic injection of ether had been given him before it was deemed prudent to move him to the ward. The police

constable who brought the patient to the hospital said that he found him lying in a pool of blood on the floor of a room in a house in a neighbouring street. A razor lay on the floor about a yard distant from him. He was conscious and breathing quietly. He asked "Where am I?" To the question "Who did it?" he answered in a loud whisper "Me." On the table in the room was a note in his handwriting leaving his body to the hospital, "as it is not worth burial." The gash was not quite central, but it reached rather more to the left than to the right side of the neck. Its length was about five centimetres and it gaped about two centimetres at its middle. Its edges were ragged, and when drawn apart a deep irregular hollow was apparent, the back of which was formed by the prevertebral muscles and vertebral column, on which were seen the lowest part of the pharynx and the œsophagus. The former of these, near its junction with the latter, had in it a wound two centimetres long, opening its lumen. When the upper tegumental margin of the deep gash was raised the upper part of the severed cricoid cartilage came into view; it, with the higher laryngeal structures, had been drawn up within the mandibular arch. The division of the cricoid cartilage had been effected by a succession of sawing cuts, which had also detached completely several small pieces of it which were lying loose in the wound. The lower part of the cricoid cartilage in connexion with the trachea had retracted so much towards the root of the neck that it could not immediately be seen, but with a laryngeal mirror it was recognised at the level of the upper opening of the thorax. First, bleeding having been completely arrested, the cut in the gullet was closed with three sutures. Next, the lower part of the cricoid cartilage was seized with a vulsellum forceps, pulled up and drawn forwards to the level of the margins of the tegumental wound, which made it possible without risk of suffocation to flush out the deeper recesses of the wound with mercuric perchloride solution. This done the upper and lower parts of the larynx were united with two stout silk sutures on each side passed through the cartilages. These held the parts of the larynx firmly together. A large Trousseau's tube was previously inserted in the trachea. A little iodoform was dusted upon the cut surfaces of the wound and this was protected from direct exposure to ward atmosphere by a couple of layers of carbolised gauze strained over an improvised wire cradle serving as a respirator. Little pieces of ice from time to time placed in his mouth seemed to assuage thirst, which by signs he indicated to be very great, nutrient suppositories and enemata were ordered. Throughout the day he was quiet, but at 11.30 P.M. he grew restless, and he tried to leave his bed. For this one-third of a grain of acetate of morphia was hypodermically injected. After this he was again quiet. At 2.30 A.M. on the 16th (next day) death occurred.

At the necropsy, in addition to the laryngeal injuries mentioned, several cuts were found in the thyroid cartilage, especially on the right side, passing completely through it; the arytenoid cartilages had been severed from the cricoid and the right true vocal cord was divided. The bronchi and lungs were found congested, the right lung deeply so, and the left lung emphysematous. In the anterior mediastinum were calcified remains of a caseated lymph gland. The aorta was slightly atheromatous. The left testis had not descended; it was atrophied.

MORPETH DISPENSARY.

CASE OF ACUTE YELLOW ATROPHY OF THE LIVER; NECROPSY.

(Under the care of Mr. STANLEY YEOMAN.)

ON account of the extreme rarity of the above disease and the unprecedented age at which it occurred, a record of the case will prove of value. Bristowe writes: "Cases of malignant jaundice have been observed chiefly in adults and in women more frequently than in men. But children are now and then attacked with it, and we have recently seen a typical case in a child two and a half years old." Greves described a case in a child aged twenty months. The characteristic symptoms of the disease in Mr. Yeoman's patient were well-marked absence of febrile temperature with the presence of hæmorrhages in the skin and from the mucous membranes and an unusual amount of jaundice. No cause could be ascertained for the onset of this rapidly fatal disease, the etiology of which is still unknown.

M. M——, aged ten months, was first seen on Monday, Feb. 23rd, 1891. The family history was good, except that a sister and brother of the father had died of phthisis. The mother had always had good health although she was a thin and weakly-looking woman with little colour. This was the eighth child; she had lost only one previously. The child had always been considered healthy, but had had a slight attack of bronchitis two months ago. The infant, a fine, healthy-looking child, was suffering from jaundice, which had been noticed by the parents the day before (Sunday). Up to that time she had been in good health. There had been some slight vomiting on Sunday, but nothing serious enough to make the parents uneasy. On examination the child appeared remarkably fine for its age and was well nourished, but suffering from well-marked jaundice, the conjunctivæ being more markedly stained than the skin. There had been some slight vomiting the day before, but none since. The tongue was slightly coated; the bowels had been opened the previous day, the motion being soft and of a pipe-clay colour; pulse and temperature normal; abdomen normal; lungs and heart normal. On Tuesday (the 24th) the jaundice had increased in intensity, and there was some hæmorrhage from the gums, the blood being particularly dark in colour; several petechiæ were observed on the back. The edge of the liver could be made out well under the ribs, and the area of hepatic dulness was diminished. The skin was cool and dry; temperature normal. The pulse varied in frequency. No vomiting. Only a very small quantity of urine (about one drachm) was obtainable, which was of a yellow colour with a greenish-yellow sediment. A play of colours was obtained with nitric acid. The child was evidently worse, and inclined to be restless. The next day the jaundice was still more marked; the child was considerably worse, and very drowsy. The bowels had not acted. The tongue was black, there was considerable hæmorrhage from the gums, and dark blood was issuing from the mouth and nose. Besides the petechial spots on the back there were now several on the arms and legs. The temperature was subnormal and the liver dulness appeared less. No vomiting. The child rapidly sank, and died in the afternoon. During the attack the pulse varied considerably, being usually over 100 per minute. The highest was 120, the lowest 60, per minute. The head symptoms were not marked. There was some slight restlessness at the commencement of the attack and drowsiness towards the end. The treatment at first consisted in large doses of sulphate of magnesia and carbonate of magnesia. On the Tuesday five grains of mercury with chalk were given. The bowels only acted once after the child was taken ill; this, no doubt, was partly due to the fact that the parents neglected to give the medicine regularly.

Necropsy, eighteen hours after death.—A well-nourished child with marked jaundice. There were six large extravasations of blood on the back, from about the size of half a crown to a four-shilling piece. There were fifteen small spots on the left leg, two on the right leg, two on the left arm and seven on the right arm. These were from about the size of a threepenny piece to a sixpence. The heart and lungs were normal. The liver was well under the ribs and very small slightly wrinkled and flabby. The wrinkling increased a few hours after removal. The gall-bladder contained a small quantity of light-coloured fluid. There was no obstruction in the ducts. The lobules were obliterated. Weight seven ounces. The spleen weighed one ounce and a half. There was a small supplementary spleen. The right and left kidney weighed one ounce and three-quarters each. The heart weighed an ounce and a half. The stomach and intestines contained a fair amount of blood, and there were slight extravasations into the coats of the intestines. The large intestine contained hard grey fæces. Other organs were normal in appearance. Mr. Shattock examined a specimen of the liver microscopically and reported thus: "The sections show no trace of hepatic tissue, but simply granular detritus. I should consider it certainly an example of acute yellow atrophy."

Microscopic appearance of the blood.—The red corpuscles were very granular and irregular, and showed no tendency to form rouleaux. The white blood cells were greatly increased in number. There were crystals of tyrosine and cholesterine.

Remarks by Mr. STANLEY YEOMAN.—This case I consider shows in a remarkable manner the close similarity that subsists between phosphorus poisoning and acute yellow atrophy of the liver, a similarity that has led some to

suggest that the two are identical. In arriving at the diagnosis a careful exclusion of the possibility of phosphorus poisoning was perhaps the most important evidence. This was carefully confirmed at the post-mortem examination, since there was not even a minute trace of phosphorus in the stomach or intestines. Another point in the case was the absence of vomiting, which is so characteristic of phosphorus poisoning. On the other hand, the cerebral symptoms were not so marked as might have been expected. One of the most interesting points noticed during life was the remarkable variation in frequency of the pulse. The temperature, nevertheless, never rose above the normal. Considering the readiness with which the temperature rises in children from slight causes, this was well worth noting. Unfortunately, a fair specimen of the urine could never be obtained for careful examination. Finally, I may say that the extremely rapid change in the hepatic tissue, the quick termination of the case, the absence of vomiting, the unlikelihood of a child of that age obtaining phosphorus, and the rarity of phosphorus poisoning, all negative the idea of any foul play. Dr. Philip very kindly attended the case throughout with me, and I have to thank him for many of the above notes, which, unfortunately, I feel are far from complete, as the circumstances surrounding the patient considerably handicapped us.

GOONA HOSPITAL, INDIA.

ABSCESS OF THE LIVER; OPERATION; RECOVERY.

(Under the care of Surgeon-Captain SHAW.)

THE following case illustrates the treatment of hepatic abscess by direct incision and drainage from the side through the abdominal wall, adhesions having taken place between the apposed surfaces of peritoneum. It has been stated by Kartulis that the pus of hepatic abscesses following the dysentery of hot countries does not contain micro-organisms, and that therefore, should any escape into the peritoneal cavity during operation, peritonitis is not likely to ensue. It is almost impossible to exclude dysentery as a cause of the abscess, for not infrequently, although there has been no history or symptoms of that disease in fatal cases, it has been found that dysenteric ulceration of the bowel was present.

L. C——, aged thirty-four, was admitted on April 19th in a feeble and emaciated condition with the following history. Eighteen months before admission he had a severe attack of fever (malarial) lasting three months. He completely recovered, excepting that after meals he was troubled by a sense of weight and uneasiness in the gastric and hepatic regions. Some months afterwards, whilst kneading his abdomen, he noticed a swelling over the liver, and there was slight pain. More than a year elapsed when the pain become so severe that he was obliged to come into the hospital for treatment. He had never had dysentery or syphilis. His condition on admission was as follows:—Very thin, emaciated, and so weak that he could not sit up in bed; pulse 120 and thready; severe constipation, with scanty clay-coloured stools; tongue flabby and pale, except where discoloured with dark patches; complexion muddy looking. No vomiting or cough had troubled him at any time; no purulent matter had been passed per anum. The hepatic dulness reached downwards to the level of the umbilicus, but was not increased upwards. The enlargement was wholly confined to the right lobe. The patient complained of severe headache, and his temperature rose every evening to 100° or 101°. He was ordered a purgative and some "hepatic mixture," with quinine. A severe burning pain in the liver was eased for the time by a blister. Some days later the assistant surgeon tapped a very distinct bulging just below the ninth rib, drawing off twenty-four ounces of pus, and thereby giving much relief.

May 6th.—Again tapped, thirty-two ounces of pus being drawn off.

10th.—Tapped; twenty ounces taken out.

12th.—Eleven ounces more drawn off, making a total of eighty-seven ounces evacuated by the trocar.

After this the pus continued to ooze out of the trocar openings, until the patient was seen by Surgeon-Captain Shaw on May 17th. He was then terribly pulled down, could not sleep, but had no night sweats. The skin over the liver was tense and red and was bulged out, but fluctuation was absent. The pus discharged was very foul. Over the base of the right lung rough friction sounds and small crepitations were heard, but there was no dulness. As no opening had established itself between the liver abscess and the intestinal canal or the lung, and as the pus would force a passage for itself sooner or later, it was determined to drain the cavity. A probe put into one of the trocar openings followed a sinus running subcutaneously upwards and backwards for three inches and a half. Under chloroform the abscess cavity was explored through one of the openings just below the ninth cartilage, which was about four inches and a half long, two inches and a half broad, and ran obliquely backwards and inwards; its mouth was about one-third of an inch in diameter. A three-inch incision was made parallel to and just below the thoracic margin. The peritoneum was adherent to the abdominal wall; one small vessel was tied, and the necrosed tip of the ninth cartilage, which lay close to the opening, was snipped off. With the operator's finger the walls of the cavity were felt to be ragged and slimy, and about six or eight ounces of chocolate-coloured pus gushed out, mixed with what looked like lumps of white fibrin and with large blood-clots. The cavity was then washed out with 1 in 4000 sublimate solution, half an ounce of iodoform and strips of lint soaked in iodoform emulsion put in, and finally a large drainage-tube and dry dressing, which completed the procedure. Speed was imperative owing to the critical condition of the man. His temperature rose that evening from 97·6° to 100·8°.

21st (the day after the operation).—Morning temperature normal, evening 102·2°; pain much less. A little pus was syringed out of a small recess, which was opened into by the probe. There was no foul smell. The remainder of the case can be shortly stated. For two days after this the temperature rose to 101·2° and 99·8° in the evening, being normal in the morning. The cavity was syringed out daily, the discharge soon ceased, but the drainage-tube and strips of lint were kept in, chiefly to prevent the mouth from closing. Surgeon-Captain Shaw is of opinion now that they might have been removed long before they were. The tube was shortened as the cavity got shallower and narrower. The man himself frequently took out the tube when the surgeon's back was turned and persisted in squatting on his "hunkers" to eat his meals. Thinking himself quite well he left the hospital on the night of June 9th, but was taken back next day none the worse for his exertions.

June 18th.—Tube removed; cavity almost filled up. Liver dulness quite normal and base of right lung quite clear of adventitious sounds. The man has got quite stout. There is now only a very small opening left, through which a little serous discharge comes. He is about to return to his field work in a few days. He will have been about eighty days under treatment.

Remarks by Surgeon-Captain SHAW.—There is nothing definite to point to the exact cause of the disease. The frequency with which the pus had to be drawn off shows how quickly it accumulates in these abscesses and, what is more important, shows, I think, how likely any incomplete measure, such as tapping or aspiration, is to prove a failure. In my opinion waste of time and tissue might have been saved in this case by early incision and drainage. I do not quite understand why the opening of a liver abscess externally below the ribs should be looked on with so much alarm, for, I should suppose, peritoneal adhesions are almost certain to have had time to form.

HULL ROYAL INFIRMARY.—The chairman and managing committee of the Hull Infirmary have received a communication from Messrs. Reckitt, in which the writers express their intention of presenting the Withernsea hotel and grounds to the hospital as a convalescent home. The authorities, in acknowledging the generous gift, express their sense of the benefit the donation will confer on the sick poor of the neighbourhood.

THE NEW HOSPITAL AT HALIFAX.—After some delay the work of erecting the new infirmary seems to have entered a more satisfactory phase. A site, fourteen acres in extent, has been purchased, and the subscriptions already promised, along with the proceeds of the sale of the old infirmary, will, it is believed, be sufficient to cover the cost of the new hospital. The scheme formulated at the outset provides for from 130 to 150 beds, and it is proposed to build an administrative department on a scale sufficient for a hospital of 300 beds should funds be available for that extension.

Notices of Books.

How to feel the Pulse and what to feel in it: Practical Hints for Beginners. By WILLIAM EWART, M.D. Cantab., F.R.C.P. London: Baillière, Tindall and Cox. 1892.—*Die Untersuchung des Pulses, und ihre Ergebnisse in Gesunden und Kranken Zuständen.* Von Dr. M. v. FREY. Berlin: Julius Springer. 1892.—The study of the pulse is as old as medicine itself, and in the two works named above we possess as complete a view of the subject as is possible; but the standpoint of the English and of the German author is very different. Dr. Ewart confines himself strictly to the limits imposed by the title of his book; Dr. Frey aims at presenting a complete physiological exposition of the mechanism of the circulation as regards the heart beat and the pulse wave. The one is of immediate utility in daily practice; the other shows us how far science has succeeded in elucidating the various phenomena of cardiac action in health and disease. Each work has its special value and the one complements the other. Dr. Ewart's little work, although addressed to beginners, will be read with pleasure by older men who have been feeling pulses all their lives. In systematic arrangement of matter, in minute attention to detail, in taking nothing for granted but explaining each point as it arises, the book is a model clinical manual. Opening with a description of the methods of feeling the pulse, and then considering briefly the essential facts of its physiology, the author describes in turn the qualities and varieties of the normal pulse, and then the abnormal conditions. A short chapter is devoted to capillary pulsation and another to venous pulsation. There is a very useful glossary of terms employed in the description of the pulse, and a list of Latin terms appended to the volume. We doubt if anyone could find fault with a book written with such laudable intent and so admirably adapted for its purpose, whilst to the student it must be invaluable. Dr. Frey's more ambitious monograph dismisses in a few pages the information to be gained by the time-honoured method of palpation. He is more concerned with describing the sphygmograph and its congeners, which have been devised to record not only the character of the pulse wave but the degree of tension and the volume of the pulse. The cardiac movements are studied very thoroughly, both as regards the pressure conditions and the cardiographic record. The arterial pulse is then studied as to its characters in different regions, and the separate variations it undergoes under varied circumstances. In a word, the book represents the advanced physiology of the time, whilst its value is enhanced by the ample bibliography appended to each chapter.

Diseases of the Nervous System. By J. A. ORMEROD, M.D. London: J. & A. Churchill.—This is the latest addition to Messrs. Churchill's Students' Guide Series. In the execution of such a work, novelty and originality are not to be expected, or even desired; but an author who sets before himself the object which Dr. Ormerod had in view must possess a wide and intimate knowledge of nervous disease, an intuitive perception of the difficulties which a student is likely to meet amid the intricate problems of neurology, and at the same time the ability to describe in clear and precise language the various phenomena of the different diseases. The author of the work before us evidently possesses all those requisites in an eminent degree, and he is to be congratulated on the judicious use which he has made of his knowledge and wide experience. The book is divided into eight chapters; the first two are devoted to an account of the anatomy, normal and morbid, of the nervous system; the third, fourth and fifth treat of the symptoms, general and special, of nervous disease; the sixth, of diseases of the nerves and cord; the seventh, of cerebral diseases; and the eighth of functional diseases. In some parts the work is necessarily sketchy, but on the whole it is admirably fitted for the purpose for which it is intended.

The Surgical Diseases and Injuries of the Stomach and Intestines. By F. BOWREMAN JESSETT, F.R.C.S., Surgeon to the Cancer Hospital. London: Baillière, Tindall and Cox. 1892.—The title chosen for this little book is not a very happy one. It should have been "The Surgical Treatment of Diseases and Injuries of the Stomach and Intestines." The investigations and writings of Senn have greatly advanced this department of operative surgery, and while it is absurd to anticipate that his work will be crowned with the same measure of success as has followed the labours of the early ovariotomists, there is no doubt that a large number of cases that have been hitherto allowed to die unrelieved will in the future obtain a prolongation of life and diminution of suffering through the art of the surgeon. Mr. Jessett has repeated many of Senn's experiments, and has himself worked further on the same lines, and has tested some of the results he has obtained in animals in patients under his care. The results have certainly been encouraging. In the book before us an account is given of the work he has himself done in this department of surgery and of the work of Senn and many other surgeons in America, Great Britain and Germany. The various operations that have been suggested are described and criticised and the reader will find gathered together what has been hitherto scattered in surgical literature. It is not new material that is here given—most of it has already appeared in transactions of societies or in periodical literature, but it is very convenient to have it in book form. There is a certain amount of repetition that ought to have been avoided and in some places a little confusion between experiments on animals and operations on man. As a surgical handbook it is interesting and will be useful.

The Mediterranean Shores of America: Southern California. By P. C. REMONDINO, M.D. Philadelphia and London: F. A. Davis and Co. 1892.—We are quite prepared to recognise Southern California as possessing one of the best climates in the world and as an excellent sanatorium for some types of phthisis, but we confess that we feel obliged to take many of Dr. Remondino's statements with several grains of salt. For instance, he analyses the deaths from phthisis at San Diego for a period of ten years. The total number was 258. Only nine of these, we are informed, were born at San Diego, and of these eight were females. The author does not believe that these eight were true cases of tuberculosis, because (1) "the cases were attended at the end with a general breakdown, the lungs from their importance doing so (*sic*) prominently," and (2) "no one was ever infected or fell a victim to the disease by being with them." No necropsies were made. Comment is needless. Dr. Remondino is fond of classical allusions, but either he is often at fault or his printer has been unkind to him. In "Eulesis" it is a little difficult to recognise the seat of the Eleusinian mysteries and "Dionysius" is not the Greek equivalent of Bacchus.

Our Temperaments: their Study and their Teaching. By ALEXANDER STEWART, F.R.C.S.Edin. Second Edition. Crosby Lockwood and Son. 1892.—This work, the first edition of which was favourably noticed in these columns, is an attempt to throw light on one of the most obscure, but assuredly most interesting, chapters in anthropology. The author has accumulated a mass of information from philosophers, medical men, poets, artists and others to prove the existence of recognisable types or temperaments

and urges that practical lessons of great importance may be drawn from his conclusions. For ourselves we should deny the existence of even the four leading so-called temperaments—viz., the sanguine, the bilious, the lymphatic and the nervous—or rather we should maintain that the existence of intermediate types is so universal as to deprive this classification of practical value. Nevertheless, there is truth mixed up with much doubtful theory in the speculations that have been made on the question of temperaments, and anyone anxious to look into the subject will find much to interest and instruct him in Mr. Stewart's pages. The illustrations, printing &c. of the work are excellent.

The Rationale of Mesmerism. By A. P. SINNETT. Kegan Paul, Trench, Trübner and Co. 1892.—Mr. Sinnett is very severe on those who have questioned the right of Mesmer to be regarded as a great thinker and discoverer, and maintains that "the records of mesmerism, both early and recent, teem with illustrations of the way in which magnetic influence from a distance has been successfully exerted upon persons quite unprepared to receive it." It is strange that the men most qualified by training and ability to establish a new scientific fact still remain quite incredulous regarding the existence of this "magnetic influence," while freely admitting the reality of the phenomena of hypnotism. It is the explanation of the phenomena that is the disputable point. Mr. Sinnett has, of course, his *argumentum ad hominem* ready for all who question his special creed. "The incredulity of unspiritual mankind is Nature's own protection against those unfit as yet to use her higher gifts." The book is in fact an attempt to revive the belief in animal magnetism as the explanation of the mesmeric or hypnotic trance and the well-known attendant phenomena. We regard that theory as decisively disproved and see little advantage in reviving an obsolete controversy. Hypnotism is a curious chapter in psychology and, although hitherto practically barren, may yet prove helpful to mental science, if not to therapeutics. But we feel sure that "animal magnetism" in the strict sense is a chimera.

Zwölf Vorlesungen über den Bau der nervösen Centralorgane. Von Dr. LUDWIG EDINGER. Dritte umgearbeitete Auflage. Leipzig: F. C. W. Vogel. 1892.—It is only a few months since we had the pleasure of welcoming the appearance of an English edition of Dr. Edinger's well-known lectures on the anatomy of the central nervous system. The high appreciation which the work enjoys in Germany is evidenced by the appearance of a third edition in which the author has made valuable additions to the letterpress and also to the illustrations. The book in its present form furnishes one of the most complete and reliable accounts of the structure of the nervous system which we possess, and the publication of an edition which incorporates all the latest knowledge in this department of research is an event of interest and importance.

Handbook for Travellers in Northern Italy. Sixteenth Edition; carefully revised, with a Travelling Map and numerous Plans of Towns. London: John Murray. 1892.—The tourist season and the autumn months will find many of our compatriots at the Italian lakes and in the chief cities of the subalpine and Lombardo-Venetian provinces. For them there is no better guide than the time-honoured "Murray," brought up as it is to the latest and most trustworthy information. The present edition, however, is less strong in some departments than it might be—notably in that of the mineral-watering places and health resorts. Abano, for instance, and Battaglia, both in the Venetian territory, while receiving ample justice as regards their hotel accommodation and local attractions, are quite inadequately dealt with in respect of their mineral waters.

Yellow Fever: a Monograph. By JAMES W. MARTIN, M.D. Edinburgh: E. & S. Livingstone. 1892.—Although the essay on which this monograph was founded formed a paper "read before the Royal Medical Society of Edinburgh some years ago," it is by no means old-fashioned in its treatment of the subject. Besides giving a very clear and concise account of the chief facts about yellow fever and its congeners among the malarial fevers of the tropics, it discusses its etiology at some length. The author seems to be favourably impressed with the results reported by Dr. Freire of his treatment by inoculation, and ventures to predict that medical science "in the near future" will do much to deprive this scourge of the tropics of its terrors. We sincerely trust that his prophecy may be verified.

Differentiation in Rheumatic Diseases (So-called). By HUGH LANE, L.R.C.P., M.R.C.S. Second Edition. London: J. & A. Churchill. 1892.—We need merely note the appearance of a second edition of this little book, the substance of which originally appeared in these columns. It is written in a purely practical spirit and points out with success the leading features of chronic rheumatism, rheumatoid arthritis and gout, besides discussing with commendable detail the main lines of treatment of a class of painful affections which so often defy our powers in this direction. The plan of thermal treatment in the baths of Bath is stated and judicious hints given as to their prescription.

Nervous Exhaustion. By WALTER TYRRELL, M.R.C.S. London: Kegan Paul, Trench, Trübner and Co.—It is a pity that Mr. Tyrrell should have applied this title to his little book. Nervous exhaustion is now so generally used as a synonym for neurasthenia, which is daily becoming a more definite clinical entity, that it is a pity to complicate matters by embracing under the title such diseases as epilepsy, hysteria, neuralgia and "suppressed gout," whatever that may be. The author holds that these conditions are all the result of the exhaustion of what he calls "nervous force," and his treatment is directed to building this up by means of tonics &c. If his pathology is correct his therapeutics are rational, but we doubt whether his theories will meet with general acceptance.

Transactions of the Medical Society of the State of Pennsylvania. Philadelphia: Wm. J. Dornan. 1890.—Many excellent papers are contained in this number. It would be impossible to criticise the whole of them here, but we would specially draw attention to the "Address in Hygiene" delivered by Dr. Thomas J. Mays on "The relation between Artificial Inoculation and Pulmonary Consumption," although we cannot agree with one of the sentiments expressed—namely, "that never was an *ignis fatuus* pursued which left more promises broken and greater anticipations unfulfilled than the bacillus theory, so far as it stands related to the prevention and treatment of pulmonary consumption." Interesting also are the papers on "The Management of Obstinate Dropsies," by Dr. James Dyson, and "Prolapsus of the Rectum in Children," by Dr. K. R. Wharton. As a chronicle of local epidemics and diseases the reports from various county societies are worthy of note.

The Veterinary Journal. August 1892. Edited by GEORGE FLEMING, C.B., LL.D., F.R.C.V.S. London: Baillière, Tindall and Cox.—The articles in this number are of full average interest, and comprise, amongst others, a description by Mr. J. Clarke, F.R.C.V.S., of a disease in cattle commonly called grass disease, which seems to have hitherto escaped distinct notice. A paper by Veterinary-Captain J. A. Nunn, F.R.C.V.S., on the use of Cocaine in Masking Lameness, is also worthy of perusal. An editorial article in this number deals with a subject which is now exciting considerable attention—namely, the prevalence of glanders. The editor suggests that recourse might be had to mallein as an aid to diagnosis in this disease.

Analytical Records.

COMPRESSED PELLETS OF CASCARA SAGRADA AND OF PEPSINE.

(WYLEY'S, LIMITED, COVENTRY.)

AN examination of both these preparations proved very satisfactory. The contents of the compressed pellets of pepsine were, on experiment, shown to be remarkably active on coagulated albumen, rapid digestion ensuing, the liquid subsequently exhibiting the reactions for peptones. We regard the pepsine pellets, therefore, as a suitable and elegant form of digestive. On examining the cascara pellets they were found to dissolve gradually in cold water until a brown mass of extract was exposed which was not entirely soluble in water, but almost completely in spirit. Seeing that the pellets contain all the desirable ingredients of the "sacred bark" they are calculated to serve a useful purpose, and are especially adapted for the administration of this drug to those who in other forms find it unpleasant to take. Both pellets are coated with pure cane sugar.

TRITICUMINA FOOD AND BREAD.

(MEABY'S TRITICUMINA COMPANY, READING.)

The preparation of these farinaceous foods is evidently based on sound scientific reasoning. Triticumina is described as a wheaten food malted under conditions specially ascertained for the purpose of rendering the product most suitable for use as a digestible food. This statement is borne out by our analyses, which elicited that the food contains twice as much soluble carbohydrate as ordinary wheaten flour, while it was particularly rich in valuable phosphatic constituents, the total mineral matter amounting to 1·32 per cent. This proportion of valuable mineral constituents is doubtless secured by the use of the entire wheat in its preparation. The specimen of bread made from this flour is an excellent brown loaf of uniform texture, having a sweet nutty smell on fracture and keeping moist and fresh several days. The microscope showed the presence of branny particles, but so small in size as to be hardly distinguishable by the unaided eye. We have not examined a better specimen of bread or one that approaches more closely to the ideal.

DORINA BISCUITS.

(H. B. CHIBNALL, 77 AND 79, KING-STREET, W.)

These biscuits, which more nearly resemble cakes, are suitable for invalids because they contain a high percentage of soluble carbohydrates, a suitable proportion of fat and a corresponding quantity of mineral salts, including soluble phosphates. They make an excellent sop when prepared with milk in the manner directed, and being largely soluble little effort is required to masticate them. They contain more phosphate than ordinary bread and an increased amount of dextrin and maltose. The microscope shows wheaten starch cells, which have undergone certain changes consequent on well-regulated cooking. The biscuits, no doubt, possess distinct nutritive value.

LIQUOR PAPAIN ET ACID GLYCERINE: PAPAIN TABLETS AND LOZENGES, &c. (DR. FINCKLER AND CO.)

(B. KÜHN, 36, ST. MARY-AT-HILL, E.C.)

The action of papain, or, as it may be called, vegetable pepsine, very closely resembles that of ordinary pepsine, inasmuch as it not only dissolves fibrin but converts it into true peptone. Moreover, papain possesses a distinct advantage over pepsine in that it is equally active in acid, neutral, or alkaline menstrua, so that there is every probability that it is effective as a digestive agent throughout the whole alimentary tract. True papain is obtained from the juice of the trunk and fruit of the carica papaya by treating it with alcohol, which precipitates the ferment. So obtained it is quite uniform in its action. The papain forming the basis of the above excellent preparations is evidently prepared in this way. The digestive action of this curious substance is admirably demonstrated when the above glycerine extract is used for experiment. It is seen to rapidly digest white of egg when warmed to blood heat with a little water in a test tube. The lozenges, tablets and pilules afford very convenient forms for the administration of this valuable digestive, and in view of the important advantages papain possesses it is deserving of more extended trial.

SUN-CURED VIRGINIA CIGARETTES, ALL TOBACCO.

(T. P. & R. GOODBODY, LONDON AND DUBLIN.)

In a report of THE LANCET Analytical Commission,[1] which was instituted in consequence of prevailing rumours that the tobacco in cigarettes contained opium, and other injurious substances, the analytical evidence showed that there was no foundation for such suspicions, the only possible thing that could be objected to being the copper lettering used on the paper wrapper to indicate the brand. As was then pointed out, if the lettering containing copper were objected to, no doubt manufacturers could be induced to adopt some other means of indicating or distinguishing their own particular wares. Recently[2] it was reported from America that deaths had actually occurred from the excessive smoking of cigarettes, the paper wrappers of which were stated to contain arsenic and phosphorus. We are inclined to doubt whether either phosphorus or arsenic has ever been found in the paper used for cigarette making, unless in exceedingly minute and therefore negligible quantity. None of these charges, at any rate, can be brought against cigarettes when the tobacco contained in them is wrapped in nothing but pure tobacco leaf. Cigarettes have been submitted to us by the above firm made in this way. We have not obtained a tittle of evidence that they contained anything but pure tobacco. The only alkaloid detected in the cigarettes when they were suitably treated was the one normal to tobacco—viz., nicotine; search for substances of an injurious nature procured only negative results. When smoked they compare very favourably with the ordinary cigarette; they were cool and sweet and appeared to burn more slowly.

CANADIAN CLUB WHISKY.

(WALKER AND SONS, ONTARIO, CANADA; LONDON OFFICE, 18, COCKSPUR-STREET, TRAFALGAR-SQUARE, S.W.)

This whisky will not suit all palates, inasmuch as it is strongly impregnated with the peculiar and somewhat aromatic flavour of the wood in which probably it has been stored. It is very dark in colour, but in spite of this it is particularly soft to the palate, having been allowed to mature, according to Excise guarantee, for a period of five years. It blends well with aerated waters. Analysis showed the presence of a slight excess of tannin and extractive matters, but in other respects the results were quite normal. Absolute alcohol 42·50 per cent. by weight, 50 per cent. by volume, equal to 87·60 per cent. proof spirit; extractives, 0·21 per cent. The sample was quite free from all raw and injurious products.

New Invention.

THE PEDAL LEVER GAS STAND.

THE various forms of apparatus in ordinary use for the administration of nitrous oxide gas possess some disadvantages, which become especially apparent when it is desired to give the gas for an operation lasting some minutes. Until recently the choice of apparatus has been restricted to the gasometer arrangement or some form of metal bottle with a screw foot-

[1] Vide THE LANCET, Oct. 20th, 1888, p. 785.
[2] Vide THE LANCET, April 2nd, 1892, p. 769.

key. In the former the holder is generally too small and requires refilling from the metal bottle during the operation, while in the latter the screw arrangement invariably in use is not the mechanism best adapted for easy manipulation by the foot. It is often difficult to turn on and off, and the bottles are held in the horizontal position. To do away with these disadvantages Mr. Walter Smithard, L.D.S., has invented the apparatus figured below. The stand consists of a hori-

A, Screw for clamping bottles to valves. B, Aperture for indiarubber tube conveyting gas to bag. C, Pedal.

zontal base 12 in. in diameter, raised by four feet 2 in. from the ground. In the centre of the base is fixed an iron tube cased with brass. In the upper end of this pillar and in the pillar itself are arrayed the valves and springs, and projecting from the side of the base is the pedal (C). The bottles are fixed to the valves in the upper end of the pillar and held in position by a powerful screw clamp, and the gas is turned on at each bottle. The apparatus is then ready for use, and requires only the slightest pressure of the foot on the pedal to liberate the gas into the bag as it may be required. It possesses the following advantages. The stand will carry any sized bottle from a fifty gallon steel to a hundred gallon iron. The bottles are held in the upright position, which facilitates the easy and regular escape of the gas. When the bottles are once fixed and turned on, the slightest pressure of the foot on the pedal liberates the gas into the bag. There is no turning the foot round or slipping of the key, the supply of gas is under perfect control with a minimum of trouble, leaving both hands and the whole attention of the administrator to be devoted to the patient. This apparatus has been in use at the hospital for some months, and has been found most convenient, compact and easy to work.

ALEXANDER WILSON, F.R.C.S.,
Administrator of Anæsthetics, Victoria Dental Hospital, Manchester.

GRAVES' OR BASEDOW'S DISEASE IN ANIMALS.

THE morbid condition with which the names of Graves and Basedow are associated is not very rare in mankind, but it is only recently that an affection closely allied to, if not identical with, it has been observed in animals. In man, as is well known, goitre is frequently accompanied by exophthalmos and cardiac disturbance, and indeed it is these three symptoms which constitute the characteristics of Graves' disease. In later years we find mention now and again in veterinary literature of cases of goitre in different species of the domesticated animals, but until 1888 the malady under consideration was not reported as having been observed in them. In the *Archives of Veterinary Medicine*, published at St. Petersburg in that year, Jeswejenko describes the case of a four-years old thoroughbred horse which, after a long gallop, exhibited abnormally strong and frequent arterial pulsations, cardiac palpitations, and progressive weakness; it had tumefaction of the thyroid body, and in sixteen days there was very marked double exophthalmos, the ocular globes being so protruded that the eyelids could no longer cover them. The animal died in about a month. The same observer had witnessed a somewhat similar case in a small pet bitch aged seven years, but it was cured in three months on being treated with iodine. In the annual veterinary report for the kingdom of Saxony for 1890 Roder alludes to a cow which had severe palpitation of the heart, frequent and violent arterial pulsations, a thyroid body hypertrophied to the size of a man's fist and very intense double exophthalmos. This condition had been in existence for four years. Another instance—the best hitherto described—was brought before a meeting of the Paris Central Society of Veterinary Medicine not long ago by Professor Cadiot of the Alfort Veterinary School. This case was that of a horse (gelding) about fifteen years old, which had been taken to the school as a patient. The owner had been in possession of it for only six weeks and knew nothing of its history, but he had noticed that it was gradually becoming feebler. On examination the animal was found to be emaciated, very weak and apparently exhausted, with a swollen and painful fore-limb and œdematous infiltration into the dependent parts of the body, as well as several small tumours in various regions. At the upper and front part of the neck, on the trachea, was a hard and indolent hemispherical tumour adhering to the inner surface of the skin, which appeared to be constituted by hypertrophy of the left thyroid body; situated on the left side of the trachea, it advanced to the middle line. On the right side there was only slight enlargement. A very striking symptom was noted on the course of the superficial arteries; this consisted of very strong and perfectly rhythmical movements of the skin over these vessels, similar to those occurring in certain cases of aortic insufficiency; when the hand was placed over these arteries, bounding pulsations could be felt. These phenomena were more especially observed over the course of the glosso-facial, temporo-maxillary, posterior auricular, occipito-muscular, carotid and gluteal arteries. On each side of the croup and over the course of the latter vessel sudden jerkings of the skin and subjacent muscular layer were remarked at equal intervals—powerful pulsations synchronous with the cardiac systole. At the glosso-facial artery the pulse numbered from seventy to eighty beats per minute, and on compressing the superficial veins they assumed large dimensions. When the hand was applied to the præcordial region violent, precipitous and palpitating shocks were perceived, which, as it were, shook the thoracic wall. Auscultation also revealed serious cardiac disturbance, mainly marked by violent contractions of the heart which appeared to cause the animal pain. Rectal exploration of the posterior aorta and its terminal vessels gave evidence of their increased dimensions and abnormal pulsations. Inspiration was normal, but expiration was interrupted. The temperature was 38·4° C. The urine did not contain either albumen or sugar. The visible mucous membranes were slightly infiltrated, and an examination of the blood gave no reason for suspecting the existence of leukæmia. The symptoms increased in intensity and the thyroid body augmented in size until death ensued in three days after admission to the hospital. A necropsy showed the heart to be hypertrophied; it weighed seven kilogrammes; there were insignificant valvular alterations; the large arteries had an enormous calibre—they were about double their ordinary diameter—but their walls were thin; all the viscera were congested; the left thyroid body was more than ten times its natural size, measuring twenty-three centimetres in circumference and nine in diameter, and had a very vascular and fibrous aspect; it was surrounded by a thick capsule of connective tissue; there was only slight hypertrophy of the right thyroid body. In this case, related by Cadiot, one of the characteristic signs of Graves' disease—exophthalmos—was absent; but the others—cardiac palpitations, bounding pulse and hypertrophy of the thyroid—were certainly present. The absence of abnormal prominence of the eyeballs in this horse rather militates against the supposition that it was the malady in question; but then, as Cadiot pointed out, even in mankind all the symptoms enumerated are not equally conspicuous in every case, the goitre or the exophthalmos may at first be trifling and only become noticeable at a late period and successively, or be altogether absent. What predominate in this syndrome are the circulatory troubles, which appear to be dependent on an obscure lesion of the sympathetic nervous system or of the vaso-motor centres; and if it generally assumes a typical form easy to recognise, it also appears in masked or abortive forms which render diagnosis difficult. In this case it was admitted that there was something more than a mere coincidence between the cardio-vascular disturbance and the hypertrophy of the thyroid body, and that it had at least a close relationship to Graves' or Basedow's disease, of the existence of which in animals the instances recorded leave scarcely any room for doubt.

THE LANCET.

LONDON: SATURDAY, AUGUST 20, 1892.

THE Tables (which are specially compiled for THE LANCET, and which we publish monthly) giving an analysis of statistics of sickness and mortality in London may be consulted with great advantage by our readers. They indicate not only the number of deaths from the principal infectious diseases, but the number of notifications of cases of such diseases for all the London districts. To be forewarned is to be forearmed, and to know that certain diseases are abroad is a stimulus to early and correct diagnosis. Such Tables, too, are a valuable guide to the health of different districts, and should afford comfort or dissatisfaction to the sanitary authorities according as their record of health is good or otherwise.

They are useful to us to-day as showing at a glance the importance of a much-despised complaint in the list of the causes of summer mortality. It cannot be too often pointed out that the diseases which cause the largest number of deaths are frequently those which are least feared. The following is a list of the "deaths from principal infectious diseases" that occurred in London during July in numerical order: diarrhœa, 627; measles, 300; diphtheria, 129; whooping-cough, 100; scarlet fever, 88; enteric fever, 25; small-pox, 4; typhus fever, 2; other continued fevers, 2.

Our more particular purpose just now is to invite attention to "diarrhœa," which is classed among the zymotic diseases and stands at the head in prevalence and mortality at the present season. In any summer it would be right to emphasise this disease and its lessons, but it is especially so at a moment when the invasion of Eastern Europe by cholera excites anxiety. So far as cholera is concerned we may be comforted by the better knowledge of the laws of the diffusion of the disease and the better powers of sanitary authorities for resisting it. But the more we study allied diseases and learn to effectually cope with them the greater confidence may we feel in contemplating the invasion of a disease which admits of so little satisfactory treatment. Our Tables show that, whereas the mortality in June from diarrhœa in London was 200, that of July rose to 627. It is satisfactory to know that, large as is this number, it falls short of the average by 298. This may be set down to some extent to the comparative moderation of summer heat, and to the general improvement in public health due to the development of sanitary legislation and the greater diffusion of sanitary knowledge. Be this as it may, we are in the very height of the season for such disease. The temperature of the earth is at 56·5°, which Dr. BALLARD has ascertained to be the temperature at which the disease prevails, and any study of it is opportune. It may be premised that most of the mortality from diarrhœa is among infants. "Choleraic diarrhœa" jeopardising life in adults is relatively rare, and probably much rarer than it used to be in England. The older members of the profession will remember that it used to be not uncommon to see very severe cases of "English cholera" in this country with evacuations that produced collapse and sometimes suppression of urine. Even in a healthy season diarrhœa still causes in London in one month 627 deaths. The pathology of these cases has always been more or less obscure. The older authors used to say that in many of the cases the necropsies revealed no lesions, and that the flux was a merely functional one attended with no change of structure. Of late years the accounts of the morbid anatomy have been more definite and serious. In cases that are without inflammatory symptoms, severe and yet not fatal, it is probable that there is some turgescence of the intestinal glands. The glands are more distinct than usual. Dr. J. LEWIS SMITH of New York, to whom we owe good descriptions—clinical and anatomical—of infantile diarrhœa, says the solitary follicles of the large intestines especially are in most cases elevated and their central depression distinct; the patches of PEYER are also prominent. In the graver cases, attended with pyrexia and lasting a week or more, serious lesions are found, and the disease is a genuine enteritis. Dr. SMITH says: "The 1500 cases of so-called cholera infantum, reported every summer in this city, are, with now and then an exception, cases of inflammation generally protracted." He adds the following suggestive sentence: "In like manner the excess of reported cases of infantile marasmus in the second half of the year over those reported in the first half should be added to the statistics of intestinal inflammation." He made eighty-one post-mortem examinations of such cases, and remarks that the lesions he found resembled those described by BILLARD, who says: "In 80 cases of inflammation of the intestines that I examined with great care there were 30 of entero-colitis, 36 of enteritis, and 14 of colitis." Dr. EMMETT HOLT, an American physician, found that in his experience infantile diarrhœal diseases were associated with distinct lesions. Of fifty-seven such necropsies follicular ulceration existed in nineteen, or 33 per cent., and in almost every case the solitary follicles were very much enlarged. The extreme heat of American summers, the indifferent sanitation of American cities, and the lax and excessive feeding of American children, account for the great prevalence of this disease in America as well as for the amount of thoughtful study it has there evoked. The great thing for a practitioner to do in regard to any case of infantile diarrhœa is to ascertain whether it is of the simple or inflammatory order. The temperature should be carefully taken. In young children it is best taken in the rectum. If persistent pyrexia be present together with emaciation after profuse vomiting and purging in young infants the case should be regarded as serious; but in many cases, even though of inflammatory origin, the temperature may be subnormal and the appearance may indicate collapse. The causes of such attacks are chiefly high temperatures of the air and earth, improper or unsound or excessive food, chills, and insanitary environment. To enumerate the chief causes of such a serious disease is to indicate its chief remedies, which must consist in moderation of heat, with flannel bandaging of the abdomen; in food, the nearest to that of mother's milk; in the removal of everything unhealthy in the dwelling, or of the child from the crowded city, where such diseases are most fatal, to the seaside or a country air. The feeding is often the

most difficult problem, and must be worked out in each case. In some cases with persistent vomiting it is well to suspend milk for a time and substitute barley water. The milk used should be perfectly fresh and sweet, and it is often safest to use it boiled. A mixture of barley water and milk, with or without a little lime water, is frequently beneficial, but in severe cases meat juice, from scraped raw beef, with a little glycerinum boracis, will often give satisfactory results. A linseed poultice on the abdomen is often signally useful. Medicines play a secondary part, but they have their uses. Purgatives are rarely necessary, owing to the excessive evacuations with which we have to deal, while opium has to be used with very great caution. A few drops of brandy in food are often beneficial. All sorts of drugs have been recommended, but the simpler sort are the best, and probably few are more useful than a teaspoonful or two of chalk mixture, with a few grains of bismuth. The individual judgment of the practitioner in each case, formed in the light of ascertained facts of causation and pathology and guided by previous thoughtful consideration and experience in dealing with infants, is, however, the sheet anchor of safety in the treatment of a disease which is so frequently full of danger.

THE powerful articles on the future water-supply of London which have lately appeared in *The Times* are, we are glad to find, in perfect accord with the views so often stated in these pages. The writer, evidently no friend to the London County Council, yet agrees that the London County Council alone, or in coöperation with the City authorities, must undertake the control of the future supply. He holds that in London "our county councillors, our School Board representatives, our guardians and so forth are sheer products of the influence of the wire-pullers upon the gullible and ignorant voter." Yet he urges that the metropolitan water-supply must either be entrusted to this Council or to a vaguely defined analogous body. It is somewhat premature to discuss the question now while it is under the consideration of a Royal Commission, but it is our plain duty to repeat and emphasise the remarks which we made when this body was appointed not many months ago. The considerations involved are complex, but may be ranged under three heads—viz., sanitation, justice and economy. Each would require a volume for its complete consideration: all that can be offered here is an imperfect synopsis. First, as to the sanitary aspect of the case. For more than twenty years we have urged that the present metropolitan water-supply is unsatisfactory in quality. Whatever care may be used in the protection of the sources of supply, danger of accidental and serious pollution must always exist when the supply is drawn from rivers flowing through populous districts. We have repeatedly pointed out the dangers to which the Upper Thames is exposed; and, although at ordinary times no ill effects can be traced to such pollution, any zymotic epidemic might render the danger urgent. Filtration is at present our only safeguard, and the value of efficient filtration has been abundantly shown by modern bacteriological research. But, to say the least, it would be premature to assert that the most careful sand filtration would render water that had recently been polluted with the cholera or typhoid bacillus safe as a London water-supply. Secondary to, but hardly less important than, the quality of the future supply is its quantity. The development of London in late years has been so gigantic that it is not possible to form any accurate judgment in regard to its future extension. Upon any reasonable estimate the requirements of the metropolis will soon be greatly in excess of its water-supply. Very little more water can be drawn either from the Thames or the Lea, and supplementary contributions from deep wells are problematical not only as to quantity but also as to their possible effect upon local centres, a consideration which leads us to the second of our headings.

Justice in regard to water-supply must be considered from two points of view. First, existing rights must be respected. Anything approaching to confiscation of money fairly invested, not only by original speculators but by *bonâ-fide* investors, would be repudiated by the conscience of the country. We know by experience that the price paid when property is acquired by compulsory purchase is always in excess of the real value, and this is in accordance with strict equity. Extravagant over-payment is unjust to the public, but under-payment or very mean payment is unjust to thousands of individuals. We may be sure that in the future, as for the most part in the past, these opposite errors will be avoided. Justice to local centres outside the metropolis must also be carefully observed. To denude another town or even a village of its water-supply without reparation would be manifest injustice, and the avoidance of this injustice is probably the gravest difficulty which the Royal Commissioners have to face.

With the economic considerations involved in this great question we have no immediate concern. They are for the statesman rather than the man of science. Every friend to his country will admit that the blessing of a free supply of pure water, obtained without interference with the rights of others, is worth purchasing even at a high price. Most people are by this time convinced, as we have long been, that a great ultimate economy, and no extravagant outlay, will follow the adoption of a wise reformation in our London water-supply. As for the future sources of supply which are still open to us, we must for the present, for lack of space, reserve our opinion.

THE article on "The Art of Dining" which appears in the current number of the *Nineteenth Century* from the pen of Colonel KENNEY-HERBERT contains many hints not only interesting from the social point of view, but also important dietetically. The proper choice, preparation and serving of food is not a matter to be handed over to gourmets or gluttons, or to be regarded as merely interesting from the æsthetic and gastronomic point of view. It is in reality a national question of the very first magnitude, touching the public health in one direction, the public purse in another, and not indirectly affecting the well-being and happiness of every rank and every individual. National food customs, on the one hand, reflect and, on the other, to a material degree influence national character. They are the growth of ages, and are largely affected by questions of race and climate. Hence sudden and thoroughgoing reforms are not to be expected, and are hardly desirable. Still it is wholesome to have our national failings in this regard indicated, and to have lines

of possible development and amendment pointed out. It can hardly be said that our national record in the matter of *cuisine* is a good one. Few are the foreign authorities which have ever been found to praise British cookery, and, with all our national self-complacence, we do not select this topic as one on which we can justifiably plume ourselves. Yet those who have travelled most will be the readiest to agree that on one point we probably excel the civilised world—viz., attention to the quality of meat. It may be questioned whether any beef or mutton quite equals that of the British islands, and assuredly, with all our failures in the gastronomic art, no other people are so careful to secure the fineness of quality and condition of the meat brought to the tables of the wealthy and well-to-do. This deserves to be remembered when our errors and defects are under review.

Colonel KENNEY-HERBERT treats mainly of the formal or elaborate dinner, and finds much to condemn in the profuse and ostentatious style now widely prevailing amongst us. He is for simplicity, and lays down as sufficient for all purposes the following *menu*:—A soup, a piece of fish, a *relevé*, an *entrée*, a roast bird, an *entremet de légume*, a sweet *entremet*, a savoury morsel and dessert. The important point in this arrangement is the place of the *relevé* after the fish and before the *entrée*. There can be little doubt that, contrary to current custom, this is the natural order of things. The *relevé* is the principal item in the repast and should not be later than third on the list. The diner begins with soup, because, if wearied by fatigue or long fasting, nothing is so quickly absorbed or so readily excites the digestive powers as a small quantity of warm meat essence, such as are the best soups. Fish follows, not of necessity, but because it is a light and wholesome article of diet, which from its comparative absence of flavour could not be relished after the more savoury meats. At this point it is obvious that the principal item of the meal should be served, and the interpolation of a trumpery *entrée* is (if we carefully interpret our needs) really an obviously unnatural arrangement. On the other hand, when the appetite has been fairly satisfied with the substantial *relevé*, there is much to be said for following it with a delicate and attractive *entrée*. The roast fowl, vegetables, sweets and dessert seem, on the whole, a natural arrangement, which it would be impossible to alter for the better. The course composed simply of vegetables is almost always found on the Continent, and may be made one of the most attractive and wholesome features of the meal.

The writer makes merry, and not without cause, regarding the curiosities of nomenclature presented by the orthodox bill of fare. He relates how on one occasion whitebait was announced as *à la Madras*. "Happening to know something of the Southern Indian capital I waited for a new experience, for as they have no whitebait they have no special way of serving it there; when lo! the small fry appeared plentifully besprinkled with raw curry powder....No sane person uses curry powder in the form of pepper in the land of Ind." The writer's strictures might extend further in the same department. The phraseology of the ordinary *menu* is more frequently than not a hideous hotch-potch of French and English, a meaningless jumble of arbitrary and often ill-chosen terms. We would not plead for reducing the *menu* to pure Anglo-Saxon, for it must be admitted that for many indispensable terms that language furnishes no equivalent for the French terms in ordinary use. Such words as *entrée*, *entremet*, *relevé*, *fricandeau*, *macédoine*, *soufflé*—to mention a few out of many—have no satisfactory equivalents in English, and we seem obliged to borrow from our neighbours, whose culinary genius has so manifestly surpassed our own. But we do earnestly plead for some restriction upon the multiplication of needless and often senseless novelties in such expressions. It would surely be possible to limit the number of accepted French culinary terms and to attach to each a definite and limited meaning.

Colonel KENNEY-HERBERT condemns in strong terms the current craze for making things look pretty. "We have become the victims of a decorative mania ..... The use of fancy colours, without consideration of their congruity, for the sake of prettiness, to tint the maskings used in savoury cookery, is surely preposterous; for how in the natural order of things can a fillet of fish be green or a cutlet of chicken pink? ..... Who can see without pity in the window of some fashionable culinary professor a noble salmon that never did anyone an intentional injury put in the pillory and exhibited as a peepshow to the passer-by, with his back bristling with prawns like the 'fretful porcupine'; crayfish disporting themselves about him, his sides outraged by a gruesome tattooing of truffles and divers devices in patterns like a Maori masher, and, lastly, to complete the atrocity, an impalement of hideous 'hatchet' skewers? Surely this is as bad as the desecration of 'dead Hector' with the garish bedizenment of a circus clown." Perhaps the most revolutionary point in the article in question is the suggestion that the modern dinner should be brought to an end within an hour. This would, indeed, be a relief, but it seems too much to hope for. For the purpose of expediting the progress of the dinner the writer suggests that the various component parts of the meal should be served ready helped from the *buffet*. He also recommends the abolition of the service of cheese. There are many other points in Colonel KENNEY-HERBERT'S article which invite attention, but we advise our readers to study it for themselves. Whatever may be advanced *contra* from the social or æsthetic side the teaching of the article is thoroughly sound dietetically.

IN a striking and suggestive paper read before the recent meeting of the British Medical Association at Nottingham, Dr. A. J. HARRISON of Clifton described a new treatment for lupus, which, so far as it has at present been tried, holds out every promise of success. We have ample evidence that tuberculosis is curable. At post-mortem examinations old tuberculous nodules are frequently found at the apices of the lungs, and the investigations of Drs. KINGSTON FOWLER, SIMS WOODHEAD and SIDNEY MARTIN have shown that though some of them may still prove infectious to animals, others are completely innocuous. Hitherto, although numerous attempts have been made to cure tuberculous affections, no specific has as yet been discovered. So many failures have there been that any new announcement of a remedy for tubercle is received with scepticism, amounting almost to contempt. These feelings were greatly increased after the unfortunate fate of tuberculin. Warned by the disappointment which followed the discovery of the eminent Berlin investigator, who was forced against his own inclination and

better judgment to prematurely announce to the world the result of his labour, Dr. HARRISON was careful to avoid prediction, and confined himself to suggestion. This is a safer path, and will not detract from the merit due to the originator of a new departure in therapeutics.

The process is a strictly logical and scientific one. The germicidal action of sulphurous acid is well known, but hitherto it has only been taken advantage of for disinfecting purposes. An outbreak of tuberculosis occurred among the monkeys in the Clifton Zoological Gardens. On burning sulphur in the house further infection was stayed for a considerable period. This was the first in the series of ideas which led to a trial of the treatment now under consideration. The second was the powerful action of gases in their nascent condition. It is remarkable that more advantage has not been taken of this property in medicine. PEREIRA, in his book on Materia Medica, published in 1849, in speaking of the treatment of certain skin affections, refers to the use of the hyposulphite of soda to which a little sulphuric acid has been added; but for the purpose of destroying germs *in situ* it has never before been used. The first part of Dr. HARRISON'S process consists in saturating the affected tissues with a solution of hyposulphite of soda, forty grains to the ounce, and then applying a lotion consisting of five drops of strong hydrochloric acid to the ounce of water. An improvement in the patient's condition is speedily noticed, islets of healthy scar tissue first making their appearance. The process of healing rapidly extends, producing a healing surface unequalled by any that has yet been obtained by other methods, except perhaps after frequent scrapings; but there s no loss of substance. Some ten cases have been thus treated, all with satisfactory results. One case, which was exhibited at Nottingham, was so advanced that operative measures were out of the question, but after six months' treatment a series of healthy scars is now all that remains. In some of the cases the treatment was purposely suspended for two months, before all the lupoid tissue had disappeared. At the end of this period there were no signs whatsoever of any breaking down in the scar, and even the lupoid tissue which remained was contracting, as if the pabulum upon which the germs fed had been rendered unsuitable for their further extension. This was especially marked in one case, where previously there had been an ulcerated surface the size of a five-shilling piece. With the exception of three small points this had entirely healed and only a healthy white scar remained.

Logically there would appear to be no reason why this treatment should not be equally beneficial in cases of phthisis, although the difficulty of satisfactorily causing vapours to penetrate deeply into the lung is well known. Indeed, Dr. HARRISON has under his care one case in which sprays of the two solutions were used with marked decrease of physical signs and symptoms and considerable improvement in the general condition. It remains to be seen, of course, how long the improvement already noticed will continue, but the result in lupus affords encouragement for further trial of this treatment by other competent observers.

OUR report of the proceedings of the meeting of the British Medical Association at Nottingham may fitly be supplemented by a word of congratulation on the success of the symposium dedicated to the discussion and promotion of medical missions. THE LANCET, as its readers are well aware, has taken a special interest in this development of professional activity abroad, and has from time to time drawn attention to the salutary progress it has made, particularly under the auspices of its long-established and now flourishing school at Edinburgh. Gratifying evidence was given by the speakers at Nottingham—especially by Dr. MARTYN CLARK—of the greatly enhanced proficiency of the medical missionary in the science and practice of the healing art as compared with his equipment in these essentials when the movement was still young, and further testimony not less gratifying was adduced as to the benefits that must be reaped by the profession at large through the observation and the experience of its members in regions abounding in native products as yet imperfectly analysed, and in climatic sites capable of being utilised in many disorders of the system, hæmatogenic and neurotic. In the latter respect the reports of the medical missionary in Africa, southern and even central, are full of interest, showing how anæmia and mal-nutrition can be effectively combated by residence on elevated plateaus where oxygen and sunlight combine to produce an alterative and stimulating effect highly restorative to the patient. As to the former consideration—the addition of new therapeutic agents to the pharmacopœia—the outlook for medico-missionary research is quite as promising. The civilised world has lately been celebrating the fourth centenary of the discovery of America, and in the cities—Spanish, Italian and Transatlantic—associated with the life and enterprise of Columbus, museums organised for the occasion have been rich in specimens of the medicines, from the quinine-bearing cinchonas downwards, contributed by naturalists in fields made accessible by the great explorer. What has been done in America will one day be achieved on the Dark Continent. Medical science, represented in its newly opened-up interior by missionaries professionally trained, can derive nothing but gain from its search for new products, vegetable, animal and mineral—products which may yield "weapons of proof" to the armoury of therapeutics, or combine effectively with the old for the alleviation or cure of disease. Anticipations of this kind rise irresistibly to the mental view from such related or recorded experiences as those lately heard at Nottingham, and gain outline and complexion from the contemplation of England's colonial expansion and from the honourable careers to which it invites an already amply stocked profession. Hand in hand with political advance and with t. e absorption of new or virgin territories under the British flag proceeds the beneficent activity of the medical mission, reclaiming the less favoured peoples of the earth to civilised life and adding fresh tributaries to the main stream of an ennobling evolution.

UNDERPAID MEDICAL OFFICERS.—The chairman (Mr. S. Trevail) of the Sanitary Committee of the Cornwall County Council, in a report of that committee, states that in too many instances the medical officers are inadequately paid. Parliament has constantly imposed additional work upon them without making any provision for payment of services that were not thought of when the office was created. Consequently in too many cases beneficent sanitary legislation, requiring proper supervision, has remained a dead letter.

Annotations.

"Ne quid nimis."

A MEDICAL MEMBER OF THE NEW MINISTRY.

WE are gratified to be able to announce that the office of Political Secretary to the Local Government Board, over which Mr. H. H. Fowler will preside, has been offered to, and accepted by, Sir Walter Foster, M.D., F.R.C.P.Lond. &c. This is the first occasion on which a member of our profession has been included in the ranks of Her Majesty's Ministry. We have long advocated the establishment of a distinct department of Public Health, and we venture to regard Sir Walter Foster's appointment as another step towards that desirable consummation. Sir Walter Foster is a representative member of our profession, and during his Parliamentary career has rendered valuable services to medicine and largely advanced the interests of the public health. We feel sure that his term of office will be marked by still further important progress in this direction. It is as yet too early to forecast what effect the change of Government may have with regard to those great health questions with which we are more immediately concerned, but the appointments of Mr. H. H. Fowler as President of the Local Government Board and of Sir Walter Foster as Secretary augur well, we feel convinced, for the future efficiency of that very important department. The advantages which will accrue to the department, the profession and the public by the post of Secretary being filled by a member of the medical profession, and especially by one so well qualified for the work as Sir Walter Foster, are so obvious that it is unnecessary for us to dilate on them at greater length on the present occasion.

THE NEW HONOURS.

THE QUEEN has been pleased to approve the appointments, amongst others, of Professor William Henry Flower, C.B., F.R.S., F.R.C.S. Eng. &c., Director of the Natural History Museum, to a Knight Commandership of the Civil Division of the Most Honourable Order of the Bath; and of Richard Thorne Thorne, Esq., F.R.S., M.B.Lond., F.R.C.P.Lond. &c., Medical Officer of H.M. Local Government Board, to a Companionship of the same Order. This is the first occasion on which the Medical Officer of the Local Government Board has had any honour conferred on him during his tenure of office, although Sir John Simon was made a C.B. and Sir George Buchanan was knighted on the occasions of their respective retirements. In the present case the department of public health, as well as Dr. Thorne Thorne personally, receives recognition. Doubtless the honour bestowed upon Dr. Thorne is also in some measure due to the conspicuous value of his services as British delegate at the recent sitting in connexion with the Venice International Sanitary Conference at Paris, when the previous results of the Conference underwent very considerable and highly necessary modifications. We heartily congratulate Sir William Flower and Dr. Thorne Thorne on the well-merited honours which Her Majesty has been pleased to confer on them.

CHOLERA INTELLIGENCE.

SINCE our last issue cholera has continued to spread in Russia, although the area of its diffusion has not been materially increased. The most important extension of the disease is that which is reported from St. Petersburg itself; an extension which may at any moment open up the question of the transmission of the disease by means of sea traffic between the Baltic and this country. On the 16th inst. there were 44 cases and 9 deaths in the Russian capital. Some further extension of cholera in the central provinces of Russia has also taken place; but perhaps the most serious news from that empire is the large increase in the number of attacks and deaths which daily come under official notice. Thus whereas a week ago the fresh attacks and deaths per diem hardly exceeded some 4000 and 2000 respectively, they have now risen until they have reached some 8000 and 4000 respectively. On the 15th inst. the official records announced 9601 cases and 4288 deaths, on the 16th the numbers were 7600 and 3900 respectively, and on the 17th they were 7809 and 3742; it being at the same time announced that returns from many places were not received and hence that these numbers do not represent the total cholera in Russia. In Astrakan, at Baku, at Nijni-Novgorod, in the Transcaspian districts and even in Moscow a diminution of the epidemic has shown itself, the abatement being in some places very marked; but, on the other hand, the disease is still spreading fatally in the Don provinces, at Saratoff, Samara, Simbirsk, Orenberg and Viatka, and the province of Taurida north of the Crimea is also now an infected district. A further important extension of the epidemic is into Austria-Hungary, the province infected being Galicia. Seven cholera deaths are reported from Szklo, near Jawaroff, in the north of the province, and one such death near Kolomea in the south-east. "Cholerine" is also stated to have broken out at Lemberg. This extension is under any circumstances a matter of some gravity, but had it occurred earlier in the hot season its significance, for this year would have been even greater. From Paris the news is much more satisfactory. With the onset of cooler weather, the cholera has materially abated, and unless the rumour of its recurrence at Surcelles and at Clichy-la-Garonne turns out to have any foundation in fact, it appears practically to have subsided in France. There is, however, a serious outbreak of so-called cholerine at Havre. All along, the infection seems to have lacked much of its ordinary power for spread, and we earnestly trust that a period of immunity from the disease will now set in, and that it will be found practicable during that period to take such steps as will prevent the chance of any recrudescence next year. As we anticipated in our last issue the Local Government Board have taken some steps to prevent the importation of cholera as the result of the Russo-Jewish immigration into and across this country. The knowledge that cholera can be conveyed in bedding, linen &c., combined with the fact that these people nearly all carry with them bedding which is, to say the least, the reverse of cleanly, rendered it necessary to stop the importation of such materials, whether the emigrants reach us after travelling across Northern Germany, *viâ* Hamburg, or whether they come from Baltic ports. Hence the prohibitory order which has been issued as the result of Dr. Theodore Thomson's inquiries concerning this Russo-Jewish traffic in the ports of London, Grimsby and Hull.

DEATH ON THE OPERATING TABLE.

A CASE has recently come under our notice which, if carelessly observed or vaguely reported, would probably be ascribed to the anæsthetic, but which in reality was the result of several causes, the effect of the anæsthetic probably being the least important. The patient, a weakly boy of thirteen years of age, was originally admitted into the Royal Free Hospital suffering from enlarged cervical glands; these were successfully removed and for a time he did well. Gradually, however, a swelling suggestive of a psoas abscess appeared in the left iliac region, and at the same time an exostosis developed on the knee. It was thought advisable to open the abdominal swelling, and for this purpose the patient was taken into the operating theatre on the morning of Saturday, Aug. 6th, and was anæsthetised with the A.C.E. mixture. A careful dissection was required in order to reach the abscess

cavity, which proved to be a very large one, containing between thirty-eight and forty ounces of thick creamy pus, and which was rapidly evacuated; no communication between this cavity and the abdomen or with a carious spine could be detected. The abscess was accordingly washed out, the anæsthetic withdrawn and the dressings applied. The patient was under the influence of the anæsthetic for between thirty-five and forty minutes and rather over an ounce of the mixture was administered by the semi-open method—i.e., on a sponge contained in a leather mask. The application of a rather elaborate dressing occupied about eight or ten minutes, and signs of returning consciousness became apparent; in another five minutes sickness supervened. It was then noticed that the lividity of the face was becoming more marked and that the pulse could not be felt at the wrist. The breathing continued quite regularly, but was somewhat shallow. This condition of affairs continued for about another five minutes, but gradually the breathing became more irregular and spasmodic in character, finally ceasing between twenty-five and thirty minutes after the time of the withdrawal of the anæsthetic. All possible means of resuscitation were employed, but with no result. At the post-mortem examinatioon the heart was found to be pale, thin-walled and flabby, but beyond this the necropsy furnished no particular information as to the cause of death. The immediate cause of death in this case was undoubtedly cardiac syncope. This syncope may have been due (1) to the feeble constitutional condition of the patient; (2) to the rapid emptying of such a large abscess cavity in such a region; and (3) to the sickness which may or may not have been induced by the anæsthetic. Most probably all these causes had a share in the production of the fatal result, and certainly no particular one of them can be considered to be solely to blame.

THE ITALIAN TRADE IN COSMETICS AND DYES.

AT a recent sitting of the Consiglio Superiore di Sanità a list of unhealthy industries was drawn up, but a good deal of discussion had to be got over before it could be decided upon. One difficulty was that of not unduly interfering with manufacturing interests, and a very clear case of danger to the public health had to be made out before any of the industries suspected could be included in the list in question. Finally, the "catalogo" as approved was sent up for revision to the Superior Council of Agriculture and Commerce, and from that body it will return in the state in which it is intended to be put in force. Immediately connected with this discussion was the trade in perfumes and dyes, and on this the Consiglio Superiore di Sanità announced that cosmetics and tinctures used for colouring the skin and its appendages, if they contain poisons, can be sold only in compliance with the law on public health and hygiene which in terms of Article 32 prescribes certain precautions. On the phials and on the paper packets containing such cosmetics or dyes and in the advertisements of the same addressed to the public there must be indicated the quality and the quantity of whatever poisonous substances enter into their composition; on the phials and paper packets, moreover, must be put a label inscribed "poison." By this law the cosmetics and dyes in question are not withdrawn from the market, but the public are simply warned of the nature of the articles offered for sale. This is a salutary innovation on the legal disabilities affecting the chemists and druggists of Italy. It was certainly a grievance that, while they had to observe the minutest restrictions in making up small doses of poisonous substances and had to give every guarantee to the public that specialties of their own as well as medical prescriptions should duly certify the nature and amount of their contents, even when these specialties were innocuous, the vendors of cosmetics and dyes should have been allowed to ply their trade without supervision or regulation of any kind, launching on the public any quantity of such *objets de toilette*, charged as these were with acetate of lead, with nitrate of silver and other ingredients quite as dangerous. This decision of the Consiglio Superiore di Sanità is another of the many salutary proofs of the care with which the public health of Italy is now safeguarded. In the not less important matter of foods and drinks the activity of the officers appointed to detect and expose adulteration is very reassuring. For the month of July, and in Rome alone, the seizures made by these "Vigili Sanitari" included 13,567,850 kilogrammes of articles unfit for consumption. In the same month and in the same city there were 2733 shops and storehouses visited by these officers, 1419 "confirmations" of saleable articles were made, twenty-one "specimen" samples of food were sequestrated, five flagrant contraventions of the sanitary law were denounced, fifty-one local regulations were imposed, in eighty-one cases "acqua potabile" had to be laid on by proprietors of premises, and reports as to fifty-seven suspected contraveners of the law were submitted. All this must be very gratifying, not only to the English-speaking resident or visitor, but also to the Italians themselves, who have suffered far too long under abuses in the matter of their food and drink for which there is no other adjective but "scandalous."

CANCER "CURES."

THE announcement of an exposure by a committee of medical investigators of the Count Mattei cure for cancer is satisfactory. The faith in the alleged remedy was probably very shallow, and those who believed in it will be quite capable of disbelieving in the exposure. Evidence to those who believe in cancer "cures" by pretenders and dealers in secret remedies is very much thrown away. Even if one fraud is exposed another will quickly take its place. The fresh spurt of energy in a newspaper announcement of a provincial remedy is probably to be explained on this principle. The public in these matters is willing to be deceived. It cannot await the slow development of regular medicine. The serious thing is that both in the Mattei business and in others medical men are involved whose professional qualification gives colour to the pretension. It will be interesting to see how a certain journalist will take the Mattei exposure. The remedy was accorded a publicity by this gentleman, to which no doubt it owed a certain amount of success. Credulity is not a very safe quality in a journalist, however well meaning and benevolent; but the very least we can expect from him will be that he will give a cordial publicity to the exposure, exhibit some improvement in the critical faculty, and not lightly again lead the public into the indulgence of false hopes of impossible results from distilled water.

THE NEW FEVER HOSPITAL FOR LONDON.

THE proposal of the Metropolitan Asylums Board to establish a fever hospital on a site near St. Anne's-road, Tottenham, has excited the keenest opposition on the part of the surrounding inhabitants, individually, collectively and in their several corporate capacities. The Local Government Board have, however, given their consent to the scheme after receiving a report from Dr. Bridges and Mr. Hedley. The consent is subject to the following conditions:—(*a*) That no buildings for the reception of patients shall be erected except on such land as the Board may direct to be used for that purpose; and (*b*) that the land and buildings shall, during the twelve months next following the date of the order, be used for the reception of patients suffering from fever, and of no other patients, and at the expiration of that term shall cease to be used for the reception of patients unless the Board, by order, otherwise direct. Both the inhabitants of the district in question and and the managers of the Asylums Board are placed in a very difficult position. No neighbourhood cares to have close

at hand a great fever institution, especially when it is erected for the benefit of a population other than its own. But the Metropolitan Asylums Board have a statutory duty to perform, and they have an emergency to face which the Government and the metropolis expect them to meet by some appropriate action; and when the question of the several specific fevers, other than small-pox, is concerned, they have the authority of abundant experience to show that in the case of hospitals situated in densely populated parts of London no spread of disease and no cause of ill-health result to the surrounding community if the hospital is properly administered. We cannot, therefore, blame them for their insistance on securing the site in question; neither is there any aspect of public health as to which they could have been expected to hesitate in the action they have taken. But, so far as the neighbourhood of the hospital is concerned, we fear that the limitation of the Order of the Board to one year will have but little meaning. A site once devoted to such a purpose will probably acquire a vested right to be retained for similar purposes, and, in face of the necessity of additional means of isolation for the metropolis, the prospect of an abandonment of this site after the expiration of any definite term of months is not a hopeful one for the locality.

MATERIA MEDICA IN SCOTLAND.

WE regret to find that, for the present at least, the appeal of the professors of materia medica in Scotland has been unsuccessful, and that, as the regulations now stand, students will be required to pass an examination in materia medica and therapeutics at the end of the third winter session, or at the end of the succeeding summer session. Professor Cash from Aberdeen, Professor Fraser from Edinburgh, and Professor Charteris from Glasgow lodged a formal "humble petition" against the proposed changes, and the committee appointed by the Privy Council heard counsel on their behalf. Under the new regulations it is enacted that students should attend a class of twenty-five meetings for instruction in practical pharmacy in lieu of the existing class of fifty hours of instruction in practical materia medica; that the title of the class of materia medica shall be changed to that of materia medica and therapeutics; and that the subject of materia medica and therapeutics shall be grouped along with the subjects of anatomy and physiology for the purposes of examination. The vexed question of the definitions to be assigned to materia medica, to therapeutics and also to practical pharmacy, yet remains for the decision of the professors of materia medica in the three Scotch universities. In their petition they indicated their view that practical materia medica should include not only practical pharmacy, but also "the practical study, by chemical testing and other means, of the characters of medicinal substances, in order that there may be acquired a knowledge of their chemical and physical characters sufficient to enable the student afterwards to combine these substances in prescriptions, and properly employ them in the treatment of disease." The new enactment which reduces the practical course from fifty to twenty-five classes must necessarily interfere with the efficiency of the teaching. We will not say that a great deal may not be done in a systematic course of instruction extending over twenty-five classes, but it will obviously be impossible that the same amount of detail and thoroughness can be compressed into half the time which has hitherto been devoted to this branch of study. The further contention of the professors of materia medica, that it will be difficult to teach therapeutics, with much hope of advantage, to students who have no knowledge of pathology seems also to be based upon due consideration of the students' requirements, and it is to be regretted that the committee of the Privy Council have not been able to modify the regulations in accordance with their views. As matters stand at present, the professors will have to organise classes in practical pharmacy, but students will not be examined in this subject at any stage in their course, and they will have to teach therapeutics to students who are still working at anatomy and physiology and who have not necessarily any knowledge of morbid processes or of the pathological terms employed. The scheme appears to have been the result of undue haste, and it seems to be doomed before it has properly come into existence. There can be little doubt that after a short time of trial the scheme will require revision. If practical pharmacy is to be properly taught it must be accompanied by the stimulus of an examination. If the subject of therapeutics is to form an integral part of the course on materia medica, students should come to the lectures prepared by some clinical experience and by some pathological training, otherwise the lectures might almost as well be delivered in an unknown tongue.

MOSQUITOES IN FLEET-STREET.

IF only the parallel were more exact, one might appreciate in personal comfort and security the humorous contrast implied in the present visitation of London by a swarm of mosquitoes. It is suggested that these have been imported from Algeria with shipments of esparto grass for paper-making. However they have travelled, it strikes one as somewhat singular that while so many citizens with their families are enjoying a country holiday, the insect multitude has come to town, and on serious business. Unfortunately the mutual displacement is at best imperfect. A luckless residuum of mankind who must spend the season in town cannot evade the unpleasant invasion of these uninvited visitors. Untrained by custom in such matters they can but adopt haphazard, in mere self-defence, any arrangements which may most readily suggest themselves. In recent articles we have referred to some of these, and there can be no doubt that in the prospect of attentions which are always most irritating nothing could be much more appropriate than the veil, well saturated with some antiseptic. Of the value of suitable face washes we have also already spoken. Yet one other contrivance, even more easy of use because automatic, might be mentioned. This consists in the familiar practice of suspending some rather pungent antiseptic, such as carbolic acid or eucalyptus, in a vessel over a small gas-jet, lamp or candle so that the fumes may impregnate the air of apartments which are all too close to accommodate both men and mosquitoes. Human endurance may well sustain the feather weight of such trifling impedimenta, and even enjoy the incense of unwonted odours when they bring deliverance from an acquaintanceship as trying as it is unhappily seasonable.

BOILED MILK AS AN ALIMENT ABROAD.

THE practice of subjecting milk to boiling heat before consumption has of late been widely adopted in European countries, whose public hygiene has hitherto been such as to counsel every means of minimising the conveyance of infection. British travellers, in Latin countries especially, will be reassured by this salutary innovation, experience having taught them that the milk supplied in hotels and pensions and added to their morning meal of tea or coffee, has too often been tainted with the micro-organisms of infectious or contagious disease, chiefly from being diluted with impure water, or, not seldom, from containing the desquamatory débris of convalescents from scarlet fever. Sanitary truth progresses slowly in those regions, and when the public health officer at length succeeded in establishing the unwelcome fact that milk was one of the surest channels by which infectious diseases were diffused, he had to encounter the objection that the boiling process to which

he insisted on its being subjected deprives it of its nutrient properties and also its digestibility. Again, however, he has been able to show that reason was on his side and that milk after boiling is not only more easily digested, but has actually a higher nutrient value than in the crude state. We allude especially to Dr. Chamouin's experiments, in which he fed a number of kittens on boiled milk and an equal number of kittens on the same milk as it came direct from the cow or the goat. Those of the former category he found to be twice again as fat and healthy as those of the latter. A kitten, however, which was left to its mother was the fattest and healthiest of all, though this was due to the assiduous attention which the maternal instinct supplied and which the experimenter pleasantly admitted was beyond the resources of the laboratory. Following up his demonstration, Dr. Chamouin examined the statistics officially issued by the Town Council of Paris as to the infantile mortality of that city, and finding that the chief cause of this was, directly or remotely, intestinal ailments, he prosecuted his researches still further, so as to include a comparison between those infants that had been fed on boiled and those that had been fed on unboiled milk. As he anticipated, he found a remarkable diminution in the death-rate of the former. His investigation was continued long enough to show that thousands of nfants are annually safeguarded from intestinal disease and death by the precaution of boiling the milk on which they feed.

THE PREVENTION OF "OVERLAYING."

THE Registrar-General, in his last annual report, notices the fact that more than twice as many infants are suffocated by "overlaying" on Saturday than on any other night in the week, and this he attributes, no doubt with perfect justice, to the intoxication of the parents during the previous waking hours. This is not the first time that a connexion between drunkenness and what, in view of obvious risks, is really a form of infanticide, has been commented on. Unfortunately the whole process of causation in respect of the latter cannot thus be explained. Even if this were possible we could hardly hope by any near or general advance of the temperance movement to reduce materially this heavy tribute of child life, but something should certainly be possible by another and more direct procedure. Rather more than a year ago, in treating of this subject, we took occasion to denounce the common custom which allows mothers and infants to occupy the same bed. We fail to see why this practice should be any longer permitted. Unless perhaps in certain exceptional cases of low infantile vitality there can be no excuse for its continuance. Over and over again it has been shown to be directly and almost inevitably accountable for a certain constant loss of infant life. Why, then, should not a young child, like any other, sleep in a separate cot? The cost of providing this is trifling. The necessity is imperative, and we see no reason why the absence of such an arrangement should not be held to be as punishable an offence as ordinary overcrowding.

MINUTE ANATOMY OF THE LUNG.

DR. W. S. MILLER of Clark University has done some useful work on the minute anatomy of the lung, and has thus added to the investigations previously carried out by Ewart and others. A paper by Dr. Miller is published in the *Anatomisches Anzeiger*, Nos. 7 and 8, April, 1892.[1] The lung was studied in various ways—by injections, corrosions and reconstructions. The last-named method was carried out as follows: For the more complex lungs the reconstruction method of Born was resorted to, by which, after the devotion of nearly two years to a single specimen, the desired effect was produced. The lung was first prepared by making a triple injection by which the capillaries were filled with Prussian blue, the arteries with vermillion and the veins with ultramarine-blue gelatine. A single lobule was then removed, imbedded in paraffin and cut into sections twenty micro-millimetres thick. The magnifying power employed in reconstruction was one hundred, and each section was drawn on a wax plate two millimetres thick. As long as the terminal bronchus was in the section it was quite easy to locate all the air cells from section to section. Beyond the terminal bronchus the location of the bloodvessels and the shape of the air vesicles served as guides. In this way all the air cells communicating with one bronchus were drawn on wax plates and the sections carefully cut out. The framework left, when piled up, gave an exact model of the air sacs, and the pieces piled gave a "corrosion" of the same. The models were now cut in various directions in order to study the relation of the air sacs to the terminal bronchus. These studies, which were made on a dog's lung, gave the following result:—A terminal bronchus gives off a number of passages called vestibules, each opening into an expansion called the atrium. From this three or more air sac passages run to as many air sacs, which are much larger than the atria. Around the air sacs lie the air cells—to be accurate, it should be said some of the air cells, for there are others arising from the bronchi and from the atria. The air cells do not communicate directly one with another. Dr. Miller states that the walls of the atria are thin, like those of the air sacs, having a network of capillaries enclosed in them. From this it may be inferred that these parts, as well as the air cells, serve for respiration. The branches of the pulmonary artery follow the bronchi. Somewhat beyond the terminal bronchus the vessel divides into as many terminal branches as there are atria. Their ramifications cover the central side of the air sacs, the capillary network which arises from them enveloping the whole system, and emptying into veins which lie on the peripheral side. In the lobule each air sac has a vein running at right angles to the direction of the artery. For the most part the veins keep on the periphery of the lobule. Each air sac has an artery on its central and a vein on its peripheral side, with a rich capillary system between them.

[1] Abstract in the Boston Medical and Surgical Journal, June 30th, 1892.

THE ITALIAN CONGRESS OF INTERNAL MEDICINE.

ON October 25th next and on the ensuing days up to the 28th inclusive the "Società Italiana di Medicina Interna" will hold its fifth annual Congress in Rome. Its President will once more be Dr. Guido Baccelli, professor of clinical medicine at the Sapienza, and its proceedings will this year have the special interest of forming, so to speak, a prelude to the "Congresso Medico Internazionale di 1893," which, according to the Italian press, will constitute the most significant event which scientific Italy has witnessed since the revival of learning. The agenda paper for the meeting of Oct. 25th next includes three subjects of the highest importance, theoretical and practical—subjects fixed upon at the Congress of last year, and, according to the commendable Italian custom, consigned to special "relatori" (reporters), two for each subject, who have already proved themselves experts or proficients in the same. These are: (1) Inflammatory Alteration of the Cerebrum and its Treatment, by Professors L. Bianchi and F. Vizioli; (2) Climate as a Therapeutic Agent, by Professors C. Forlanini and B. Luzzatto; and (3) Rheumatic Infection, by Professors A. Riva and T. Gualdi. Besides these central themes a number of subsidiary ones will be introduced, several of which have already been announced by intending participants at the Congress, while others will be intimated to the organising committee before the 15th prox., after which no communica-

tions of the kind can be received. The terms on which the profession in Italy are invited to assist at the Congress are liberal enough to show the interest taken by the Government in its success—a ten-franc subscription entitling the subscriber to travel by railway at reduced fares and to receive a copy of the official "Atti di Congresso." Representatives of the profession from foreign countries are also, as we can testify, cordially welcomed on these occasions by their Italian brethren, and British practitioners or consultants whose autumnal holiday may find them in Rome during the last week of October would find much to interest and gratify them in the proceedings of the Congress. With this view, applications for tickets of membership should be made to Dr. Edoardo Maragliano, professor of clinical medicine in the Genoese school (Via Galata, 39, Genoa), who has been commissioned by the organising committee to furnish all applicants with the required information.

LAVATORIES AT RAILWAY STATIONS.

ANYTHING that seriously affects the comfort of the larger half of the English people can hardly be a matter of trivial consequence, and this is of course the more true if the health of so many persons is at the same time involved. Such a matter is public lavatory accommodation, respecting which complaints have recently been heard that due provision has not been made for the larger—that is, the female—section of the community. A lady writes to us objecting to the penny tax imposed on those of her sex who make use of this form of convenience at railway stations. We confess that we can to some extent appreciate, though we do not perhaps entirely sympathise, with her view on the subject. In so far as the needful relief of physical discomfort is concerned the railway companies are certainly bound to provide amply for it. This, we allow, is not done at most railway stations, and herein there is clearly room for improvement. At the same time it must not be forgotten that sometimes even passenger trains are fitted with needful appliance for securing a fair measure of comfort. Curiously and also culpably enough the purpose of cleanliness is apt to be more evident than its practice in this case, for many of the lavatories are by no means well kept. When, however, we come to questions of copious water-supply and the finding of well-washed linen towels we confess that the right to charge a trifle seems to us to be fully justified. The lesser, coarser, and in many ways inferior male half of the population are in this respect no more highly favoured than their feminine betters.

INJECTION OF MILK INTO THE VEINS.

A CORRESPONDENT writes to ask us whether the statement contained in Cope's *Natural History* of 1864 be true that "if milk be injected into a vein it will quickly become fatal, and that with more certain destruction than even the venom of the viper." Our correspondent also wants to know, if this be true, how is the danger brought about. It is not the first time these questions have been submitted to us for answer, and we admit they are difficult because the evidence is conflicting. It would seem that in some cases new milk injected into a vein undergoes coagulation and by the immediate plugging of the veins which it induces causes rapid death from mechanical arrest of the circulation. We have reason to know that this has been proved by experiment, and also that on injecting fresh milk into the peritoneal cavity of a narcotised animal, in order to ascertain if there would be absorption of the fluid from the peritoneal surface, absorption of the saline and watery part, with coagulation of the caseine in rather a dense layer over the intestinal surface has been demonstrated. These facts would seem to give credence to the statement that milk cannot be safely injected into the system; but there are other experiences that modify that view. In 1854 the late Dr. W. Bird Herapath of Bristol suggested that milk should be injected into the veins of persons in the collapse of cholera; and it is the fact that Dr. James Bovell of Toronto did inject milk in such cases in the cholera sheds of Toronto in the same year, acting independently on his own suggestion. Dr. Bovell reported on six cases in which he injected fresh cow's milk and two of the cases recovered. It was objected by ourselves and by others at the time that two cases afforded insufficient evidence of a direct advance in practice, and that the quantities of milk transfused—twelve ounces in one case and eight ounces in the other—were too small to give assurance of positive results apart from other influences that were at work and that would account for the recoveries. At the same time the experiences proved that there are circumstances under which milk can be injected into the venous circuit without danger, and that one of those circumstances is a condition when this remedial measure is most demanded and most promising. For the moment we may leave the matter with two suggestions—namely, that the danger which may result from the presence of milk in the veins is not septic, but is from coagulation of the milk and the plugging arising therefrom; and that if this danger could be prevented very important results might be obtainable from transfusion of milk in collapse of the choleraic type.

FUNCTIONAL NERVOUS DISEASES.

DR. W. H. THOMSON of New York recently read a paper before the Association of American Physicians on the above subject. An abstract is given in the *Boston Medical and Surgical Journal* of June 30th. The term "functional" has been applied in general to nervous diseases in which no characteristic organic changes have yet been demonstrated. Most writers, however, regard the term as only provisional, on the assumption that some kind of structural change in nervous matter must underlie every definite nervous disorder and that such change will in time be found. Dr. Thomson has long been of opinion that there are intermittent nervous disorders which cannot be explained by any hypothesis of changes in nervous matter, whether molecular or otherwise, but are to be explained by the varied states of the blood. By a proper selection of functional poisons some close imitations of functional neuroses can be artificially induced and cause neuralgia, paralysis, delirium, convulsions and all intermittent symptoms of the kind, and then it is noted that these symptoms disappear in about the time and order that the functional nervous attacks decline. Another correspondence between functional poisons and functional neuroses is that in both pathological anatomy affords no assistance in the explanation of the results. Modern chemistry has shown that in the healthiest processes of our digestion a whole series of poisons are elaborated which are of the same nature as the functional poisons with which we have been long familiar, and are quite sufficient to cause every variety of functional nervous derangement and even to kill, without the microscope or scalpel being able to tell why. Against the perils of auto-infection the system is provided with a variety of safeguards. One of the most efficient seems to be the antiseptic properties of the digestive secretions, which keep the putrefactive processes in the alimentary canal in check. The liver also subserves a preservative function against auto-infection. But the complex chemistry of these secretions is liable to numerous disturbing influences, notably nervous irritations. If nervous influences are capable of deranging the chemistry of the body, why may not such perturbances of nervous origin, occurring now and then as nervous actions characteristically do, suffice to produce either increased amounts of alkaloidal poisons or else to diminish the effectiveness of the normal

antidotal processes? These considerations seem to offer us a hint of the explanation of the intermittency in functional neuroses. The bearing of this view on treatment is as follows: First, instead of vaguely expecting help from structural anatomy to show him the pathology and treatment of this difficult class of diseases, and meanwhile choosing his remedies according to the old empirical methods, the physician should look for aid from the knowledge of the chemistry of diet; second, gastro-intestinal antisepsis should be studied as a particular branch of therapeutics. Lastly, the investigation of leucomaines, of which lithæmic states are an example, is of equal importance in a great variety of morbid states with functional disturbances. Directed by these three principles, suggested by the progress of organic chemistry, Dr. Thomson thinks that the treatment of functional diseases would be much more effectual than if we continue to seek for mere drugs with specific properties or to wait fruitlessly the verdict of pathological anatomy.

THE NOTIFICATION OF INFECTIOUS DISEASE.

DR. RAYNER D. BATTEN, of Campden Hill, has been fined at the West London Police Court for not sending a notice or certificate to the medical officer of health—as required by the fifty-fifth section of the Public Health (London) Act—in the case of John Weston, aged fifteen, who was suffering from diphtheria. Mr. Blanco White said the result was that for five days the premises were not disinfected. Mr. Curtis Bennett said that two notices were necessary, one for the hospital authorities and one for the medical officer of health. The medical man ought to have sent the notice himself as required by the Act. The magistrate regarded the fault of Dr. Batten as due to carelessness and not wilful negligence, and imposed a fine of only 10*s.* with 12*s.* costs. A report of the case is published in another column.

RUPTURE OF THE INTESTINE.

CASES of injury to the abdomen in which laparotomy has been performed for rupture of the intestine without external wound are as yet so few in number that a record of each is important. The diagnosis is usually so difficult that the surgeon hesitates to open the abdomen for fear he may be mistaken and subject the patient to what may prove to have been an unnecessary operation. Yet if the intestine be ruptured certain death will ensue without operation, and operation will probably not be of avail should it be deferred until the onset of septic peritonitis. A patient aged twenty-four was admitted to St. Thomas's Hospital on the 10th inst. suffering from the effects of a kick in the lower abdomen from a horse. He was suffering from shock, and had an anxious expression and pale face; he lay on his right side with his thighs flexed, complained of pain in the abdomen, and vomited frequently. The abdomen was excessively hard and very tender, moved very little with respiration, and on percussion was found to be quite dull over the anterior part. Urine was expelled through a catheter with some force and was quite normal. A faint bluish discolouration over the left rectus muscle indicated the part struck by the hoof of the horse. A probable rupture of intestine with rupture of omentum or mesentery was diagnosed and operation was decided on when he had rallied somewhat from the shock. About six hours after the infliction of the injury Mr. Battle performed median abdominal section, the incision extending a short distance above the umbilicus. Much blood was found in the peritoneal cavity, and there were three complete transverse ruptures of the small intestine with lacerations of the mesentery. The extent of the injuries necessitated excision of about thirteen inches of intestine with a good deal of mesentery. After the resection there were two lesions of intestine to be united. This was done by means of Senn's bone plates; in one instance the lateral method was employed, in the other end to end. During the operation, which was necessarily a prolonged one, it was found advisable to transfuse with saline solution, and great improvement resulted. The abdomen was irrigated and drained. With the exception of some vomiting, the cause of which was not apparent, progress was good until 7 P.M. of the 15th inst., when the patient had acute pain in the abdomen, with shock and vomiting. As this was supposed to be due to the giving way of a stitch and the consequent escape of intestinal contents leading to peritonitis, the wound was opened and extended. This diagnosis unfortunately proved to be correct, and the parts which had been united end to end, gave way as the intestine was brought up to the surface. An artificial anus was rapidly formed through a new incision, the peritoneum washed out and the median wound closed, a glass drainage-tube being inserted. The patient did not rally from the shock and died at 5 A.M. of the 16th inst. At the post-mortem examination it was found that the first rupture had taken place about twelve inches from the duodenum and the second point of union was thirteen inches beyond that. The edges where the rupture had taken place looked somewhat dusky and the vitality was low—a fact not surprising when the severity of the contusion and the extensive damage to the mesentery are considered. We hope to be enabled to publish in a future issue a detailed account of the case.

INFLUENCE OF MIND ON BODY.

IN another column we publish an interesting and suggestive paper—a paper full of "wise saws and modern instances"—by Dr. Dale. In this is illustrated on the one hand the production of disease by psychical disturbance, and on the other the cure of what may be called morbid conditions by some profound mental effect. The efficacy of strong emotion in producing, or in helping to produce, such conditions as diabetes, chorea, and epilepsy is well recognised, and we venture to say undoubted; but it is always difficult to estimate correctly the influence of such accidents, or to say how much may be due to them and how much to an underlying instability which such a disturbance merely makes evident. That a depressed physical and mental condition also renders the bodily organs more susceptible to the influence of some poison, such as that of the specific fevers, is well recognised, and when the inseparable connexion between mind and body and the profound alterations which fear or joy bring about in, for example, secretory organs are taken into account it is not surprising that violent emotion should, as it were, open the gate to allow the admission of sundry toxic influences. It is an interesting question how much of the general—but by no means invariable—immunity which medical men enjoy from infectious disease is due to the calmness and unconcern with which they regard such diseases in relation to themselves. They forget to be afraid, and so they are clothed with an invisible and often an invulnerable cloak. The influence of mental effort in overcoming diseased conditions is not so well authenticated. The instances which Dr. Dale adduces are for the most part so-called hysterical conditions, and it is open to doubt how much such conditions have underlying them any actual change in structure. The helpless and paralysed lady who is frightened into activity by the threat of a drunken man to kiss her is a familiar type, but that of the man who reasoned himself out of an attack of hydrophobia is not so common, and would certainly require careful looking into. Of the efficacy of music and the "influence of sweet sounds" in producing that feeling of restfulness and comfort which is so conducive to recovery from any morbid state

Dr. Dale has a high opinion, but he enters a judicious *caveat* against allowing it to assume the garb of quackery or mystery. The consideration of the whole matter leads to an eminently rational view of the duty of the physician in relation to the mental attitude of the patient. That duty is to instil by means of faith and hope a courage which will enable him to bravely resist his foes, and Dr. Dale is of opinion that nothing more than this is to be expected from the influence of the mind in the removal of bodily diseases.

PROSECUTION FOR FALSE CERTIFICATE OF DEATH.

WE regret to have to record that another practitioner has been proceeded against for giving a certificate of death in a case which he had not personally seen, but which had been attended by an unqualified person. The defendant was Mr. Stephen Francis Smith, L.S.A., of Seven Sisters-road, Holloway. The offence was admitted and even regretted. An attempt was made to represent it as an inadvertent and not a wilfully misleading act, but the magistrate of North London Police-court (Mr. Haden Corser) fined the defendant £10 and £3 3s. costs, or twenty-one days' imprisonment. The prosecution was conducted by Mr. Charles Townley, superintendent registrar of Islington. Dr. A. G. Bateman, honorary secretary of the Medical Defence Union, attended and watched the case on behalf of that body.

FUNCTIONS OF THE CORD.

IN the summer number of *Brain* Dr. Mott gives the result of observations and experiments he has made with the view of discovering the relations and functions of especially the ascending antero-lateral tract, commonly known as Gowers' tract in the spinal cord. In summarising his results he states that the peripheral portion of the anterior and lateral columns consists in great part of ascending and descending cerebellar fibres. The former, the ascending, may be divided into a ventral and dorsal portion, and these should be named the ventral and dorsal ascending cerebellar tract instead of the antero-lateral and direct cerebellar tracts, the latter being the names by which they are now generally known. The ventral portion, it is said, may be completely divided in monkeys apparently without producing analgesia. The ascending cerebellar tract, he says, forms a connecting bridge between the superior vermis of the cerebellum and cells in the cord, the dorsal portion connecting the cells of Clarke's column with the dorsal part of the superior vermis, while the ventral portion connects certain cells of the cord with the ventral part of the superior vermis. Section of the antero-lateral column was found to produce much denser degeneration amidst the areiform fibres than could be accounted for by the slight injury to the direct cerebellar fibres. The extensive tract of degeneration corresponding to Gowers' antero-lateral tract (which he thinks, with Löwenthal, should be called ventral cerebellar) has been traced in the monkey to the superior vermis by way of the superior cerebellar peduncle, forming in its course a curious loop over the fifth nerve.

DUST, UPHOLSTERY AND DISEASE.

HOUSEHOLDERS in furnishing would do well to remember that the ordinary practice of covering a floor with carpet is not without its disadvantages, even its dangers. The particles which give substance to the pure search light of a sunbeam as it penetrates the window pane are of the most varied character. Harmless as are very many of them, there are also many more possessed of true morbific energy and capable of almost unlimited multiplication. Anyone can see therefore how, when sheltered in dusty woollen hangings, chair upholstery and carpets, they render these articles veritable harbours of disease. The less we have of such the better, especially in bedrooms. Some practical deductions naturally suggest themselves. As to curtains and carpets, it is but rational that they should, as a rule, consist of the smoother and harder fabrics which will bear thorough and frequent brushing. If thicker floorcloths and rugs be used, they should be such in size and arrangement that they can be readily taken up and beaten. It is but part of the same argument to say that as much of the floor as possible should be either varnished or laid with oilcloth, so as to allow of frequent cleansing. Cane and leather, for a like reason, are incomparably superior to the richest upholstery when we come to speak of general furniture. Some, perhaps, may imagine that in making these observations we treat this matter too much as a hobby. Only one circumstance, however, is required in order to convince any such of their real and practical significance, and that is the actual presence of infectious disease. When this appears all forms of cumbrous comfort in the apartment must give place not merely to a freer and simpler arrangement, but even to bare, sunlit, and airy desolation.

HYDROCHLORATE OF PHENOCOLL.

HYDROCHLORATE OF PHENOCOLL has, since its introduction, been known to have a certain influence in fever, rheumatism and neuralgia and to favour the elimination of nitrogen. To define this influence more exactly a series of experiments was made in Professor Eichhorst's clinic in Zurich by Dr. P. Balzer, who published the result of these experiments in the *Therapeutische Monatshefte* of last June. The hydrochlorate of phenocoll did not produce any dangerous symptoms or any disagreeable effects in any of the cases experimented on, except in two patients who suffered from cyanosis, though the remedy was administered in daily doses of a drachm or a drachm and a half. In doses of fifteen grains it is a good and speedily acting antipyretic, but not preferable to phenacetin or antipyrin. In proportion to its antipyretic effect, the pulse generally becomes slower, but not in a corresponding ratio to the decline of temperature. In the large doses above mentioned it is an effective anti-rheumatic remedy, and may be administered when salicylic acid is contraindicated. It also acts beneficially in those cases of neuralgia which have their origin in sudden cold. Phenocoll increases considerably the elimination of nitrogen in health, but does not seem to influence the rhythm of the pulse in any way.

THE TREATMENT OF ANGINA PECTORIS.

ANGINA PECTORIS and arterial sclerosis are two very common diseases in Russia. This statistical connexion is hardly surprising when it is considered that the former affection is probably due to sclerosis of the coronary arteries of the heart. The severe and prolonged paroxysms of angina pectoris may be explained by the presence of a thrombus or embolus in these arteries. Dr. Kernig, who gave a lecture on the treatment of angina pectoris before the Medical Association of St. Petersburg, which was published by the *St. Petersburg Medicinische Wochenschrift*, speaks of two cases in which the post-mortem examination confirmed the above-mentioned opinion of the etiology of the affection. In both cases sudden death had followed a severe paroxysm, and a well-defined softening of the cardiac muscle, with incipient demarcation of the focus of disease, was present. This view of the causation of the paroxysms is supported by a clinical observation which Dr. Kernig made—namely, that in some cases, in a few days after the paroxysm, pericarditic symptoms were observed, which might be understood as proving that the centre of softening had reached the pericardium. Consistently with this belief, he enjoins absolute rest for about two weeks after an attack, so as to favour the cicatrisation of the softening centre in the cardiac muscle. This absolute rest

must be maintained even when the patient feels quite well after the paroxysm and has a good pulse. He is, nevertheless, always in great danger immediately after the attack; but with complete rest and prudent avoidance of all unnecessary exertion of the heart he may escape this danger, which will be passed when the softened cardiac muscle has cicatrised. Dr. Kernig treated several extremely grave cases according to this rule without a single relapse, though one of the patients had remained for four years under observation. Patients must be particularly careful at such times, when from previous experience a paroxysm may be expected. Walking in heavy clothes must be absolutely avoided. With the first symptom of an approaching attack the sufferer must rest immediately, and if possible assume the recumbent position. When the attack occurs in the street the patient must immediately be removed to his home and should certainly not attempt to continue walking. At the same time Dr. Kernig does not fail to appreciate the value of regular and rational exercise when no fresh attack is imminent and sufficient rest has been taken after the last paroxysm.

COMPULSORY SANITARY WORKS.

THE Local Government Board are taking proceedings under Section 299 of the Public Health Act, 1875, to compel Worcester so to deal with its sewage as no longer to contaminate the river Severn. The city had been given a definite time in which to carry out the necessary works; nothing had been done in the matter, and now application has been made to the Court of Queen's Bench for a rule *nisi* for a *mandamus* to compel the Corporation to carry out the order of the Local Government Board. A similar rule was asked for against the Corporation of Rochester, but oddly enough it was limited to the village of Borstal. Why this comparatively insignificant and outlying part of the city has been selected for the exercise of compulsory powers it is a little difficult to understand. We have shown what is the state of Rochester city with its liquid filth soaking away into multitudinous cesspools, and the place has become notorious for its maintained default in regard to sewerage. The city as such is left out and Borstal alone is attacked. It may be that the lives of the prisoners and of those who are under Government control at Borstal are regarded as of especial importance in Government circles; but the general public are hardly likely to look upon any such differentiation in the same light.

PSEUDO-BULBAR PARALYSIS.

IN the inaugural dissertation of Dr. Max Anderlya is related at length a case of this character. A brief account of it is given in the last number of the *Neurologische Centralblatt* The patient was a joiner who had enjoyed good health until he was forty. At that age he had an attack in which the power of one side (he could not remember which) was impaired and he had some difficulty in moving his tongue and in articulating. He soon regained the lost power and was practically as well as before. Nine years later he had a sudden attack, losing power in his right side and experiencing a good deal of difficulty in swallowing. He improved very much, but the right arm and leg remained permanently weak. Two years later he lost power in his left side and he had considerable difficulty in talking and also in swallowing. A year after this last attack he was admitted into the hospital and he was then found to be very weak on the right side and almost completely powerless on the left. He also had much difficulty in swallowing; articulation was difficult and was nasal in character. The reflexes were present. There was loss of sensibility on the left side and the patient was unable to move his eyes to the left of the middle line. The fundi were normal. His condition remained the same as regards power; he wandered a little during the day, rather more during the night; the respiration became of the Cheyne-Stokes variety and he died eight days after admission. A careful and thorough examination, both at the time and after the specimen had been preserved, revealed a condition of softening in the right lenticular nucleus and internal capsule and a somewhat atrophied condition of the right frontal lobe. A similar but smaller area of softening existed in the left lenticular nucleus, while the medulla, pons and cord appeared normal, except for some descending change in the right pyramidal tract. The kidneys were granular and the heart dilated. The case is an interesting one and forms a valuable addition to a now well-recognised variety of paralysis in which the symptoms closely resembling those of ordinary bulbar paralysis are due to a lesion on each side of the cerebrum.

TABES DORSALIS AND SYPHILIS.

IN a recent number of the *Berliner Klinische Wochenschrift* Professor Erb gave additional support to his well-known views in regard to the close connexion between tabes dorsalis and syphilis. These again have lately been called in question by Professor Leyden, and now an abstract of Professor Erb's reply appears in the *Neurologische Centralblatt*. Professor Leyden had called in question the reliability of Professor Erb's statistical proofs, but to this the latter retorts that if in a number of patients suffering from certain conditions 80 to 90 per cent. of those are found to have suffered from syphilis, while in a similar number suffering from other diseases only 20 per cent. have had syphilis, there seems to be good ground for postulating a causal connexion between the two conditions. Professor Leyden's second objection is the inefficacy of anti-syphilitic remedies in tabes dorsalis, but to this Professor Erb's answer is that the success of such drugs is not necessary in order to establish a diagnosis of syphilis, and that there are many cases of tertiary syphilis affecting the brain and spinal cord in which mercury and iodide of potassium are quite inefficacious. Professor Leyden's third point is the dissimilarity of the morbid anatomy in cases of tabes dorsalis and tertiary syphilis, but, as Professor Erb points out, it is a matter of extreme difficulty, even impossibility, to say in such cases what is syphilitic and what is not in the various morbid conditions found; and he finally concludes by expressing the opinion that in the great majority of cases of tabes dorsalis there is a distinct causal connexion between that condition and syphilis.

REJECTION OF NOTIFICATION AT NEWTON-ABBOTT.

AT the recent meeting of the Newton-Abbott rural sanitary authority, which, on the advice of the medical officer of health, declined to adopt the Infectious Diseases (Notification) Act, 1889, some very remarkable arguments were used and statements made. One of these statements had reference to the number of cases of scarlet fever passing without medical attendance. The medical officer of health said that in that district three-fourths of the cases have no medical attendance. He said that, in an experience of nineteen years, in which he had seen scarlet fever in farm-houses and dairies in the large and populous district of 180 square miles, no instance had occurred of the conveyance of the disease. Does it not strike him that as cases are not reported and not even attended by medical men such an experience cannot go for much or be set against the positive contrary experience of others. The argument of some of the speakers was that the Notification Act was preferred to the Act of 1890 because notification involved a small fee to the medical men. This is a gross and rude misrepresentation. We must confess our surprise at the attitude of the medical officer in dwelling on the fact that his authority would have to pay fifteen shillings for notifying six cases of the disease in one family, and generally that the disease was so mild in the county as to be beyond recognition and almost beneath notice. Does it not occur to him that under

an efficient system of notification, in which the *parent* was made responsible for not reporting such facts, six cases would not occur in one family? We cannot believe that such representations can be finally accepted, even on the authority of a medical officer of health. Notification is a means to an end; and it is not easy to see how isolation and other measures are to be initiated until an authority has definite material for judgment.

FOREIGN UNIVERSITY INTELLIGENCE.

Dorpat.—Dr. Karl Schmidt, Professor of Chemistry and Senior Professor of the Physico-mathematical Faculty, is about to retire. He studied medicine and took his M.D. degree in Göttingen, and was for many years engaged especially in physiological research. He has also made a study of the modes of propagation of cholera.

Freiburg (Baden).—Dr. Kiebel has been promoted to an Extraordinary Professorship of Anatomy.

Halle.—Professor Arthur von Hippel of Königsberg has been appointed to succeed Professor Alfred Graefe in the chair of Ophthalmology.

Jena.—Drs. Leubuscher and Ziehen have been promoted to Extraordinary Professorships.

Naples.—Dr. Schoelein, Professor of Physiology in Santiago, Chile, and formerly *Privat-docent* in Würzburg, has been offered the chair of Physiology.

Toulouse.—Dr. Herrmann, Professor of Morbid Anatomy at Lille, has been appointed Professor of General Pathology and Therapeutics.

Würzburg.—The chair of Chemistry vacated by Dr. Fischer, who goes to Berlin, has been offered to Professor Curtius of Kiel, but he has declined to migrate.

THE salutary *rapprochement* between Germany and Italy reacts beneficially on the latter in no direction more conspicuously than in medical education. The system of *feriencursus* (holiday courses) in clinical medicine and semeiology, long in vogue in the schools of the Fatherland, is now being introduced into those of Italy—the University of Genoa having led the way in this commendable innovation. From Aug. 20th to Oct. 10th practical courses in these subjects will be given in the latter school, under the superintendence of Professors Lucatello and Devoto. All students and recently qualified medical practitioners may attend.

DR. J. S. BILLINGS of the United States Army writes to say that in the report of the proceedings of the Dublin Tercentenary he is referred to as being Surgeon General, U.S.A. The Surgeon-General of the U.S. Army is General Charles Sutherland, while Dr. Billings is simply a surgeon in the army with the rank of Major. He requests that the error should be corrected in justice to General Sutherland as well as to himself.

THE question of the extension of the Manchester Royal Infirmary having been submitted to the general body of trustees, the result of the poll has been shown to be in favour by 130 votes of the amendment of Sir William Houldsworth—namely, "That the trustees are of opinion that, whilst it is manifestly important that the infirmary should be retained on its present site in the utmost state of efficiency, any extension of accommodation thereon is very undesirable."

OPHTHALMIA in workhouse schools is often a disease difficult to deal with satisfactorily. In Liverpool it appears some difference of opinion has arisen as to the expediency of admitting to an industrial school children suffering in a slight degree from affections of the lids.

REPORT OF
The Lancet Special Commission
ON
SANITATION IN RELATION TO THE LAW AND PRACTICE OF HOUSE-LETTING.

NOTWITHSTANDING the enormous strides that have been made in sanitary science during recent years and the many Acts of Parliament that have been passed, and sanitary by-laws that have been framed by local authorities to secure healthy homes for the people, we have been much impressed with the difficulty constantly experienced by householders in ascertaining the sanitary history and scheme of drainage laid down in the houses which they may propose to lease and occupy from time to time. The information that has been acquired by us in our inquiry has very clearly demonstrated the reason for this anomaly; for it has proved that, with the exception of those whose work compels a knowledge of sanitation, the general public, including many landlords, affect a complete indifference to the subject,—the latter mostly from pure ignorance, the former because bitter experience in the shape of illness have never obliged them to seriously study the matter. In order to obtain the views of those best qualified to express an opinion upon this important subject as to what is or can be done under existing conditions to protect the public against insanitary homes, and what improvements (if any) in the law and practice of house-letting are desirable and should be attempted, we have submitted to 1000 house agents and surveyors in different parts of the country a series of questions for answer. Our appeal has met with a prompt and courteous response from those to whom it was addressed, and such a mass of information has been placed at our disposal and so many valuable practical suggestions put forward, that we have been able not only to appreciate the causes of the present unsatisfactory state of affairs, but also to offer for discussion some methods by which pressing evils may be remedied.

It too frequently happens that a tenant signs the agreement or lease of a house without the slightest inquiry having been made as to the drains, and such essential points as the ventilation and proper jointing of the house drain and the disconnexion of waste-pipes are completely overlooked. He is not seldom imbued with the idea that "good drainage" is a variable and elastic term, and that so long as the drains are not obtrusively offensive he had better leave the matter alone. The prevalent notion that even in the minds of sanitarians uncertainty still lingers as to what points should be kept in view to render a house well drained, accounts largely, we feel sure, for the disinclination, on the one hand, of the landlord to consider carefully the drainage of his houses, and, on the other hand, for the apathy and indifference of the tenant, who usually remains passive until roused to a sense of his danger by an outbreak of illness in his home. The evidence of our correspondents goes to show that somewhat of the blame for this erroneous belief must be fixed on those who undertake the surveying of houses and the advising of tenants as to their sanitary requirements. More than one house agent has informed us that what one surveyor has assured a tenant is sanitary perfection a second has pronounced sanitary imperfection; while not a few have said that calling in a surveyor means the employment of some particular "system" of drainage. In a word, drainage is for the public a "mysterious subject." The foregoing remarks of course apply to houses which were erected before the passing either of model by-laws or Improvement Acts. Houses built after such laws have been enforced would conform to the plan required by the Act, and would therefore be drained after modern methods. But the large majority of houses now standing would be included in the category of houses erected before this date, and, as by-laws are not retrospective, would be unaffected by them, until some nuisance had been proved to exist. It is therefore desirable, if possible, to attain to some scheme of uniformity in the drainage of this class of pro-

perty, which, while not weighing too heavily upon the landlord, would enable the tenant to live in safety and comfort. We shall point out later on how we think this end may be achieved.

The points to which our inquiries have been directed are the following:—

I. Whether the information usually supplied by clients to house agents respecting the sanitary history and condition of the property they are asked to let is sufficient.

II. (*a*) The sort of information usually supplied; (*b*) the kind of information which could and should be furnished.

III. Whether the house agent was prepared to make or obtain an efficient survey of a house and its sanitary arrangements.

IV. Whether Section 12 of the Housing of the Working Classes Act, which renders it necessary that tenements to be let shall be reasonably fit for human habitation, should be extended to all houses without distinction.

V. Whether the opinions expressed on the above would apply to houses and lodgings let for short periods at seaside places and health resorts.

VI. Whether there is anything not covered by the foregoing suggestions which should be considered.

We shall now point out, first, what in our opinion are the essential conditions which should be fulfilled before the drainage of any house can be passed as satisfactory; secondly, a brief *résumé* will be given of the opinions that have been expressed under each of the first five heads; and under the sixth will be added the most important suggestions that have been put forward for the improvement of the present state of affairs; thirdly, we shall quote some of the most representative replies that have been received; and, lastly, after discussing the most important facts that have been brought into prominence, we shall explain what appear to us to be the lines to adopt for future improvement. At the end of the report will be found a table showing the numerical results of the investigation.

We should recommend that the following points be attended to in laying down the drainage of a house:—

1. As far as possible drainage should be outside the house. The soil pipe should pass directly from the closet trap through the wall and down the outside of the house to the house drain. The soil pipe should be a four-inch lead or iron pipe; its diameter should never be less than three inches.

2. The house drain should be made of glazed stoneware or iron pipes, the diameter of which is usually six inches. It should always, when possible, be carried outside the house to the sewer, but in some cases—e.g., when houses are built in terraces—this is not possible, and the drain has then to pass underneath the basement. The drain should be laid on six inches of concrete and be surrounded with it. The joints should be carefully cemented all round, so that when tested with water and smoke no leakage should occur, and oil of peppermint poured down the top closet should not be perceptible to smell anywhere along the drain. The fall should be about 1 ft. in 40 ft. and not less than 1 ft. in 50 ft.

3. Between the house and sewer there should be constructed a manhole. Into this chamber there should pass by channel pipes the house drain, rain water and waste pipes from sink, bath &c. The manhole should be kept covered with an air-tight iron lid, which it is very important to remember should be removed at intervals for the purpose of ascertaining that no obstruction exists between the house drain and sewer. It is not an uncommon thing for the stoneware syphon trap into which the channel pipes discharge to become choked and for the sewage to be backed up behind the obstruction. It is a good plan where practicable to build two manholes, one to be placed at the front of the house drain as described, and the other at the back, so that a view can be obtained of the drain along its entire length and any obstruction be readily detected.

4. Ventilation of the drain. From the house side of the manhole there should pass a vertical ventilating pipe which should open to the air above ground. The soil pipe should be carried up full bore, without bends, to a point above the roof, and end quite clear of windows and chimneys. Where two or more closets are in use and placed one above the other and opening into a common soil pipe, an anti-syphonage pipe should always be employed to prevent unsealing of traps.

5. The kind of watercloset that should be employed is a matter of opinion, "the valve," "short hopper," or "wash out" being all in use. The pan closet is now prohibited in new houses. Closets should be provided with separate cisterns, holding from two to four gallons of water, by which they should be effectually flushed after each use. The closet should be well ventilated and have external windows.

6. The rain water pipe should be disconnected at the foot, and discharge into an open stoneware gully.

7. The waste pipes from sinks, baths and lavatories should be trapped and discharge either into channels leading to open gullies or into "heads." The overflow pipe from the cisterns should be carried into the open air, and on no account into the traps of closets.

These are the essential points, the elaboration of details and the expensiveness of fittings and materials to be employed being matters for the individual to settle for himself. We are confident that this scheme can be carried out without the incurring of exorbitant expense.

THE SUBJECTS OF THE INQUIRY.

I. The prevailing opinion amongst our correspondents appears very decidedly to be that the amount of information placed at their disposal by landlords for the benefit of proposing tenants is quite insufficient to enable them to give an accurate and trustworthy opinion of the houses they are asked to let or sell. The majority regard the silence of the landlords as due to ignorance, and not to the wilful suppression of defects, although some maintain that the question of sanitation is passed over on account of the ruinous expenditure which drainage alterations entail upon the landlord. In some towns, such as Leicester, Eastbourne, Brighton and Hastings, where houses are efficiently inspected by the local authority, the fullest information is obtainable, and landlords have little to gain and much to lose by the concealment of sanitary defects. Some house agents inform us that they always advise the proposing tenant to have the opinion of an independent surveyor; while one or two admit that the bare mention of sanitary defects may cause the agent the loss of his client. On the other hand, it is a significant fact when we are told that once a landlord has been compelled to put his drains in order and holds a certificate to that effect, he loses no opportunity of putting this forward as an additional attraction to his house.

II. From what we have said above it will be gathered that the sort of information doled out to agents is in the majority of cases not of a very valuable kind. In a few instances the landlord can show a plan of the drains and a certificate testifying to the good drainage of his property. In the generality of cases the agent has to be content with such statements as "drainage good," "sanitation perfect," "lived in the house many years and experienced no annoyance," "no case of illness occurred during last tenancy through the drains," "spent a lot of money lately on drains," &c. One of our correspondents informs us that he always advises the owner not to guarantee the drainage, but to say, "It is believed the drainage is good"! As regards the sort of information which should be furnished the majority declare that the landlord should be able to assure his tenant that the drainage of the house has been laid down in accordance with the scheme we have sketched above. In order that the tenant should be more completely satisfied and secured against drainage defects, we have received the following suggestions: (*a*) That there should be hung in the house a plan of the drainage; (*b*) that the landlord should produce a builder's certificate; (*c*) that the local authority should make periodical inspections of all houses in their district, and that certificates should be granted with date of last inspection if found in good order; (*d*) that the landlord should have the option of asking the local authority to make a survey of his house upon payment of a fee, that the local authority may advise what (if any) alterations should be carried out, and that if these be done to their satisfaction a certificate should be granted; (*e*) that plans of the drainage of each house should be kept by the local authority, which should be open to inspection on payment of a fee; (*f*) that the "sanitary history" of houses should be preserved by the local authority, so that the nature of the infectious diseases which have occurred in the house could be known; (*g*) a large number have suggested that the state of the drains should be ascertained by the tenant for himself by calling in an expert opinion, the fee for the report to be paid by the tenant.

III. As regards the surveying of houses, the majority of our correspondents have expressed themselves as perfectly competent to undertake the work, though many of them are unwilling to do so. Still the prevailing opinion is that most emphatically the survey should never be neglected before the

letting or leasing of a house. While advising the necessity for a survey, some maintain that the person to make it should not be the house agent, for the landlord being the client whose interests the agent is primarily retained to serve, an unfavourable report of the drainage may tell to his disadvantage. Again, others assert that being retained for the landlord, the agent's report of the drainage if favourable might be viewed with suspicion by the tenant, who would probably refuse to be convinced until satisfied by his own surveyor. Another objection appears to be that the house agent is disinclined to accept the responsibility of giving a definite opinion with the present uncertainty as to what constitutes "good drainage." The last and most practical objection which has been urged against the agent acting as surveyor also is that, being enlisted on the side of the landlord, he is at the same time acting on behalf of the tenant; and when the time has arrived for the agent to receive his fee, landlord and tenant have become "sicklied o'er with the pale cast of" doubt as to which of them should pay. In many cases the agent never receives a solution of the difficulty. We are informed that in Blackpool every tenant can procure a survey of his drains by application to the medical officer of health.

IV. The question as to whether Section XII. of the Housing of the Working Classes Act should be extended without distinction to all classes of dwellings is by the greater number again answered in the affirmative, although, as was to be anticipated, many hang back on account of the vagueness of the term "reasonably fit." Some would extend the provision only to houses of a rental below £40 a year, either because they consider that the rich man is well able to take care of himself, or for the simple reason that tenants of the better class prefer to be satisfied about the drainage by employing their own surveyor. A few of our correspondents think that by making the application of this section general some injustice would be done to landlords, for two reasons: (1) Because a tenant may receive a house in perfect sanitary repair, and then, maliciously destroying pipes or fittings, bring an action to recover damages from the landlord. Even in the absence of wilful damage to drains it suggests itself to the minds of some that the mere application of this section to better-class property may prove to the tenant a direct incentive to litigation; (2) because a landlord may let his house in perfect good faith, having been informed by a surveyor that the drainage was good, and then be afterwards sued for damages when defects are found out. One of our correspondents would have the Act apply to all houses except those let out to weekly tenants.

V. Opinion has been expressed with no uncertain voice that the condition in which houses and lodgings are let for short periods at seaside places and health resorts is urgently in need of reform. Nearly all are agreed that as affecting the public health of the country this is a class of property than which none is more important. We are assured by some of our correspondents that instead of being health resorts many of these houses are "veritable death-traps," and it is within the personal experience of many that the w.c. accommodation is most defective and inadequate. Some have pointed out the possibility of these houses being centres of infection unless controlled by stringent regulations. A great many agents have suggested that hotels, lodging and boarding houses should be under the control of the local authority, by whom they should be licensed, periodically examined and certificated. Others, without going the length of handing the property over to the complete control of the local authority, insist that these houses should be passed by this authority as fit for habitation, and that a certificate to this effect should be hung up in the hall or some conspicuous place. It appears that the sanitary authorities of many health resorts have already become aware of their responsibilities, and are taking active measures to ensure the safety of the public. Thus we are informed, through the courtesy of Mr. Reginald Dudfield, M.A., M.B., medical officer of health of Eastbourne, that "the corporation issues a sanitary certificate on conditions which rest with this department to decide. A draft scheme for the instruction of the sanitary inspectors and other officials has been prepared by me, but has not yet received the approval of the corporation. The building by-laws are also under consideration, and a new draft has recently been prepared. A very great improvement has been effected during the last two years in all classes of property; and the certificate being recognised by visitors as a safeguard, the number of houses fulfilling the stringent conditions of the same is daily increasing." In 1890 Mr. Alderman Bray of Hastings advocated "that a system of registration on the voluntary principle be established by the Town and County Council, granting annual certificates on payment of a small fee by occupiers or owners of houses on the acquirement by the latter of a certain standard of sanitary excellence." One correspondent has objected to houses and lodgings at seaside places being brought under the same regulations as other property on the ground that the period for which these houses are let is too short and therefore visitors must take the risk!

VI. The following are amongst the most important suggestions that have been offered other than those already detailed under the preceding five sections:—(1) That all districts, urban and rural, which do not at present work under Local Improvement Acts should adopt them as soon as possible; (2) that a code of by-laws should be published by the sanitary authority as to requirements for efficient house drainage; (3) that a Bill should be passed on the same lines as the Sanitary Registration of Buildings Act introduced by Dr. Farquharson into the late Parliament; (4) that the local authority shall inspect all houses on vacation by the last tenant, the work of inspection to be carried on by the appointment of "inspectors of buildings;" (5) that the local authority shall be the sole authority to survey houses; (6) that careless laying of drains be made a punishable offence; (7) that owners letting insanitary houses be rendered liable to be sued for damages; (8) that the medical officer of health shall not be a local practitioner, and that he shall devote his whole time to the local authority and be remunerated accordingly; (9) that the work of sanitary associations shall be encouraged and extended; (10) that vestries and local authorities shall appoint qualified surveyors whose services may be available for moderate fees, as many people object to societies and associations because they believe them to be interested in pushing certain fittings and systems; (11) that schools, public and private, be inspected and reported on as regards their sanitary condition.

We here introduce the views of some of our correspondents. (The numbers refer to the questions in the circular which we sent out.)

Messrs. Alder and Co., London.

1. We do not consider sufficient information is given to agents on this point. It is our rule not to accept particulars for letting houses where we know the sanitary arrangements are defective. Frequently our constituents know very little on the point.

2. Information of a most superficial kind. We always feel that there is a great necessity for some independent authority to have power to inspect all sanitary appliances, whether in factories, warehouses or private residences; and that a certificate be granted only where such are in a satisfactory condition. When we speak of an independent authority we have in view an authority not bent on simply putting owners to an unreasonable expense to the benefit of certain faddists and makers of certain kinds of appliances, but one who, once having decided which are the best, will act accordingly.

3. Sometimes asked to make a survey, but do not consider the agent's position between landlord and tenant a satisfactory one, unless acting independently.

4. Certainly yes. We cannot see why persons should be allowed to let insanitary tenements any more than a tradesman is allowed to sell food unfit for consumption.

5. This is a question of great importance, and one which cannot be too carefully looked into. All such places should be compelled to exhibit in a prominent position a properly authenticated certificate as to the sanitary condition.

6. We feel sure that the ordinary sanitary inspection can be much improved. Too much is left to the fads of the inspector instead of a proper scheme of sanitary laws fixed by a competent authority. We should say this authority has yet to be formed.

Messrs. Ball, Norris and Hadley, London.

1. No.

2. None beyond "drains all right."

3. Would be prepared to obtain, but not to make, a survey, as this should always be done by a specially qualified person, and one who has no other interest in the transaction.

4. No. The excuse for the provision in the case of working-class dwellings is that the tenants are unable to protect themselves; but the supposed benefit is a very doubtful one, and

redress can only be obtained by an expensive process of law after the mischief has been done.

5. The opinions given would apply to all classes of property.

6. We are of opinion that the true solution of the question is to be found in a system of sanitary registration as advocated by the Sanitary Assurance Association and provided for in the Sanitary Registration of Buildings Bill introduced by Dr. Farquharson, M.P., and the other medical members of the late House.

Mr. Thomas Chapenau Barralet, Surveyor, Richmond.

1. The average client is usually profoundly ignorant of the sanitary history and condition of the house he wishes to let or sell, unless he happens to be the builder of it or lives in it himself. As a rule the particulars we get are decidedly meagre. If sanitation be mentioned at all—and in five cases out of six it is not—it is in such general terms as "gravel soil," "good drainage," "drained into main sewer," or more frequently the sweeping assertion "drainage perfect," on the assurance of the builder from whom the house was purchased. I think more information on such points is desirable. That we do not get it is due to three causes: (1) Ignorance of client; (2) natural antipathy of owners to acknowledge defects; (3) neglect of agents to ask for information on such points.

2. Views coincide in the main with our scheme of drainage sketched above.

3. Yes; but considers that the surveyor should not be the house agent at the same time.

4. Personally favours the extension of the Act, but foresees it would bring a plentiful crop of litigation.

5. Legislation should fix responsibility on the owner and not on lodging-house keeper.

6. Local authority should keep a register, with plan of drains and special information relating to survey. Building by-laws should be compulsorily adopted throughout the country.

Messrs. Thomas Bate and Co., Kilburn.

1. Information insufficient.

2. From ignorance; property generally described as being in good sanitary condition when the converse is the case.

3. Yes; we are prepared to make an efficient survey.

4. Consider that in every case the owner of a house should be responsible for sanitary condition when the tenant enters into occupation, and that the local authority should be paid by the owner for efficient survey and certificate.

5. Remarks apply completely. This class of property should be certificated.

6. A survey should be made before tenant takes possession and at the cost of the owner.

Mr. Frederic H. Boult, Liverpool.

1. In Liverpool and the out-townships the by-laws are very strict as to the responsibility of landlords to keep dwelling houses in sanitary repair. Tenants appear unwilling to pay the fees necessary for an expert's examination. It should be incumbent upon every health committee or local board, at the request in writing of a tenant or proposed tenant, to inspect and report upon the sanitary state of any property within their jurisdiction, and this report should be registered and a copy sent to the applicant and to the owner. If necessary a small fee might be charged on receipt of application, and the report be available for reference at any time on payment of the same.

3. Yes, but think reference to local authority a better plan.

4. Yes; "reasonably fit" should be clearly defined.

5. These houses should be examined by the local authority.

Messrs. John and A. Bray, Hastings and St. Leonards-on-Sea.

1. Not in the case of properties built before the application of the present by-laws and building clauses in the Hastings Improvement Act, except where from choice or necessity sanitary arrangements have been remodelled.

2. Our proposed sanitary certificate from the Town Council would, we submit, lead to all requisite matters being in proper order, to the satisfaction of house or apartment seekers.

3. It is generally a condition of hiring that houses shall pass such survey.

4. Yes, provided that in the case of lodging and boarding houses now held under leases varying in period the outlay does not fall on the tenant in making sanitary alterations.

5. Our opinions apply equally here.

Mr. S. S. Bromhead, London.

1. No.

2. (*a*) General statements like "drainage good"; (*b*) periodical certificate from official inspector, which should be given free of cost.

3. No; because it would involve agent in trouble, and he would, besides, have difficulty in recovering his fee. It ought to be done by a public official, who would be responsible.

4. Yes, subject to official inspection.

5. These should be inspected annually.

Mr. Samuel B. Clark and Son, London.

1. Information insufficient.

2. (*a*) Unless a certificate is produced of recent sanitary improvements drains are pronounced to be sound; (*b*) in the case of furnished houses, a plan and certificate should be produced, but in unfurnished houses it may be assumed the tenant would have an inspection made.

3. We could not undertake the responsibility; and, as we should be acting on behalf of the owner, it is questionable whether the tenant would accept our survey.

4. No.

5. Furnished houses and lodging houses should have their sanitary arrangements periodically examined and certificated.

6. We would suggest that the various vestries should appoint a certain number of qualified surveyors in each district, whose services would be available to the public without fees. Many people object to the advertised societies or companies, under the impression that they are interested in pushing some particular system or fittings.

Mr. John Douglas, London.

1. In very few cases.

2. (*a*) The sort of information received is that no illness having occurred it is presumed the drains are all right; (*b*) plan of the main drain, with name of the surveyor who passed it.

3. I always make it a rule that all offers are subject to a sanitary report.

4. Yes, but it can be foreseen that the general application of the Act would lead to a good deal of litigation.

5. Every house let out for short periods or as lodgings should be under the supervision of the medical officer of health or district surveyor, and his certificate should be hung in the hall or passage. No lodging at seaside resorts should be countenanced without this certificate.

Messrs. Driver and Co., London.

We only let as a rule the vacant houses on the large estates for which we are agents and receivers. In these cases we inspect the sanitary arrangements on behalf of the owners, and, if found to be defective, they are put in order at the expense of the owner, the lessees and occupiers keeping them in order. When the estate comprises houses only, occupied on three years or yearly tenancies, the landlord first puts the estate in sanitary order and also keeps it in order at his own expense. When we undertake the letting of one or more houses for special clients for whom we are not agents or receivers, we make it our business to find out whether the sanitary arrangements are right, and where found to be out of order we advise the owner to have them put right before letting. In letting houses we never guarantee the sanitary arrangements, but inform the applicant that as far as we are aware they are fit and proper, and that it rests with the intending occupier to test the drains before taking the premises, and, if not satisfactory, the matter is thoroughly discussed between us and special arrangements come to in respect thereof. Before going into possession of a house a tenant should satisfy himself upon the question of the sanitary arrangements; but we find as a rule they object to pay a fee to an expert, and, that being so, they must put up with the consequences. Our experience of experts is this: That there are many systems of drainage; and each expert naturally thinking his own scheme the best, some "defect" in the system of others is generally found. Thus, if any intending lessee wanted a certificate from us on behalf of the owner that the sanitary arrangements were fit and proper, we should decline to give it by reason of the difference of opinion which might exist between various experts if found necessary to call one in to decide the question of the soundness or otherwise of the sanitary arrangements.

Messrs. Ellis, Morris and Co., London.

1. As regards unfurnished houses of a rental of over £80 a year no change in the present custom is requisite. The public, however, should take the precaution of having the system of drainage inspected by a competent architect before signing any contract.

2. For a smaller class of house we should think legislation might be necessary, but as this does not come within the scope of our practice we leave it to others to suggest what is requisite.

3. For furnished houses, both in London and country, we are very strongly of opinion that some legal enactment is desirable. We would suggest that before letting apartments or furnished houses it should be compulsory for the owner to take out an annual licence, such licence to be only granted after the drainage has been inspected by some properly appointed official.

4. In taking permanent residences, we find that people are well able to look after themselves, but in securing temporary abodes, and perhaps more especially at the seaside, they are in too great a hurry to take more than a superficial inspection, and no doubt more illnesses are contracted this way than any other.

Messrs. F. S. Jennings and Co., London.

1. Information insufficient. If there be anything specially advantageous in regard to the sanitary arrangements it is generally very strongly impressed upon us and very often in terms which the result does not justify. In ordinary cases this is not referred to, or if mentioned it is only in very general terms, from which the agent has to draw his conclusions for the benefit of his client.

2. Our opinion is that it should be absolutely necessary for a landlord to obtain a certificate from some public official to be appointed for the purpose.

3. If any doubt arise, we suggest that a survey should be made by an independent person at the expense of the tenant. Not in one case in fifty would the owner offer to pay the expense.

4. Certainly.

5. It is, in our opinion, desirable that the Act referred to in the foregoing question (No. 4) should be also applied to such lettings as these.

6. The desired reform can only be brought about by legislation. Agreements between firms of leading house agents would be difficult to bring about; and if concluded would not be binding on anyone except themselves; with the result that if the combined firms who declined to deal with a house in which the sanitation was unsatisfactory, the owner would employ an agent outside the combination, with the result that his unscrupulous conduct in dealing with it would perpetuate evils.

Mr. W. A. Hall, London.

1. Information insufficient.

2. The tenant should obtain the necessary information at his own expense.

3. Yes.

4. No. Would lead to endless litigation.

5. Not able to express an opinion.

6. The present state of affairs can be better remedied by more effective administration of existing Acts than by recourse to further legislation.

Messrs. Horncastle and Pember, London.

1. No. Usually our first question; and the replies returned are generally vague.

2. That the house has been drained in accordance with the modern system, which our surveyor could verify.

3. Yes. A sanitary surveyor is a member of our staff.

4. No dwelling should be let that is not reasonably fit for human habitation; but nothing should be taken for granted, and the tenant should be satisfied by an independent survey.

5. We should like the above rule to be applied here; but we fear the in-going tenant would shirk the expense in the case of a short let.

6. No hard-and-fast legislation will be entirely satisfactory and every case of letting should stand on its own merits. We wish to point out that a great many so-called surveyors have had little or no practical experience.

A Firm of Estate Agents at Bournemouth.

The necessary reform can be best accomplished by legislation. Where not in force, Local Improvement Acts should be adopted, compelling owners of buildings erected before the passing of the Act to bring the drainage of their houses into conformity with the requirements of the Act. When the necessary alterations have been carried out, application should be made to the local authority to inspect the drainage. If found satisfactory a certificate to that effect should be granted. A fee should be paid for certification.

Messrs. Fred. Long and Sons, London.

1. No.

2. (*a*) Either no information or information in such general terms as makes it necessary for the proposed tenant to satisfy himself as to the sanitary condition of the premises; (*b*) in our opinion the only information that would be of any real value would be the certificate of some competent authority as to the sanitary condition of the premises.

3. We are not prepared to make a survey of the sanitary arrangements of property placed in our hands for letting, but we are prepared to obtain an efficient and independent sanitary survey of such property—indeed, we recommend it. We are of opinion that our position as agents interested in the letting of the property is better kept free from responsibilities for the sanitary condition of the same.

4. We do not think it would be wise to make Section 12 of the Housing of the Working Classes Act apply to dwellings. The provision in question is much too general, and might lead to great injustice. What is wanted is definite information as to the sanitary condition of each and every house occupied; not an implication which is inoperative until a serious disaster results, followed by a long and expensiv legal process to recover damages. The first step towards securing the desired information would appear to be the sanitary registration of buildings as certified by duly qualified sanitary licentiates in manner provided for in the Sanitary Registration of Buildings Bill, introduced into the last Parliament by Dr. R. Farquharson, M.P.

5. Our opinion as given above would apply to all buildings alike, except that with regard to hotels and houses let in lodgings. We think the proposed changes in the law should be made operative at once, while with other property let for any long term the proposed change might be made in a more gradual manner.

6. We are of opinion that it would—at all events at present—be a mistake to attempt to throw upon the community the responsibility for the sanitary condition of private property, as would be the case if the sanitary arrangements of all houses came under the care of public officials. We, nevertheless, hold that it should be the duty of the State in the interests of the community to insist on proper attention being given by the owners to the sanitary condition of all occupied buildings.

Mr. John Marsden, ex-Chairman of the Health Committee, Corporation of Blackpool.

1. No information is ever given by the owners of property about sanitation.

2. No house should be let by a landlord or agent unless he produces a certificate from the medical officer of health that a recent inspection has been made of the premises.

3. Yes, if desired by the incoming tenant and with the permission of the landlord. In this town any tenant can have his house inspected on application to the medical officer of health.

4. Most certainly.

5. I consider that seaside houses ought to be put under the most rigid control as regards sanitation, and that such control ought to be in the hands of the State, and not in the hands of local authorities.

6. In many seaside places certificates are granted by the local authority; but these are most misleading, as I have known them to be.

Messrs. Lowton and Sons, London.

We consider that generally speaking the public can only be effectually protected against insanitary houses by legislation, and not by agreement between the leading firms of house agents. Some owners do not disclose the insanitary condition of their houses when instructing agents to dispose of them, but the public are now so alive to the necessity of proper drainage that an inquiry as to the condition of the house in that respect is one of the first made by an intending tenant. We would never allow a client who consulted us to purchase or lease a house without first having a proper survey made of the sanitary arrangements, but while such an expense can easily be borne by wealthy people it presses very hard on those who are in search of small houses. We feel very strongly that it should be incumbent on all owners of house property to put the drainage into proper condition, and we therefore give a very emphatic "Yes" in reply to your fourth suggestion. Inasmuch as those seeking houses or lodgings at

seaside places and health resorts have so little time to make the necessary survey our opinions expressed above would apply with greater force if possible to houses of that description. In some seaside places we think the local sanitary authorities have by-laws giving effect to what we so much desire.

Legislation on such a subject is doubtless fraught with many difficulties, but they should be overcome when the health of the public is at stake.

Mr. Samuel Reynolds, Bognor.

1. Yes. So far as Bognor is concerned, there has been a house to house inspection by the local authorities during the last few years, and all defective drainage has been compelled to be put right. Any person taking a house can go to the local authority and obtain accurate information as to what has been done under order of the surveyor to any house in the district.

2. I should apply to the medical officer of health as to the past history of the house.

3. Yes.

4. Yes; but I fear in some cases the official authorities are apt to overstrain the necessity, causing landlords unnecessary expense, and serving notice to put the house in sanitary condition, and refusing to supply any detailed information of what they require. This is a weak point in the Act, and leads to much arbitrary proceeding.

5. As a rule persons letting lodgings or houses where there are proper local authorities will for their own sakes have them in good order.

6. Unprincipled people not uncommonly try to get out of an agreement by making false statements about the drainage. More than half the complaints are much beyond the truth.

A Firm of Surveyors in London.

1. Information insufficient, through ignorance and not from wilful suppression of facts within the knowledge of the landlord.

2. The tenant should satisfy himself regarding the sanitary condition of his house, and himself do what is necessary to put it into thorough order.

3. Yes.

4. It would be most undesirable to extend this provision to all houses.

5. A furnished house should always be let in a condition fit for habitation, because a person taking a house for a short period cannot reasonably be expected to deal with the drains.

Mr. J. Stopher, London.

1. No. It frequently happens that owners have no knowledge either of the condition or plans of the drainage.

2. (*a*) General statement that the drains are in good order; (*b*) plan of the drains with necessary description.

3. Yes; but of course this is a matter for an intending tenant. Always advise a thorough sanitary inspection before taking a property.

4. Yes; an owner of property should take every reasonable precaution to ascertain that his house is fit for human habitation.

5. From observation I believe that, except in houses erected during the past ten years, there are more death traps at the seaside and health resorts than in some of the worst parts of London. I consider that there is need for most stringent examination before taking a house at the seaside.

6. For the protection of house agents it would be advisable to agree that a house should not be recommended unless when information is given that a certificate from a competent surveyor of the efficiency of the sanitary condition has been shown. Every water company should be compelled to give continuous water supply. This evil of insufficient water supply is the cause of frequent stoppage of drains.

Mr. T. G. Wharton, London.

1. No.

2. Usual to state whether the house has been drained into the main sewer or cesspool, and if the premises have recently been put in order. I think there is considerable risk to the owner in making statements which might be construed into a guarantee.

3. Yes.

4. No, I consider it would be unfair. An owner as a rule conscientiously believes his drains are in good order, and probably as a matter of fact they were so when the house was built; or even if they were not his architect or builder certified that they were. Why should an innocent owner, having no knowledge of the case, be made subject to actions for damages? Of course if he knowingly let a house in an insanitary condition it is a different matter. Having regard to the powers of the local authority and to the facility for inspection always given to an intending tenant, I consider he should look out for himself.

5. Furnished house or apartments should imply good drainage also.

6. I suggest it would be useful if an owner were compelled every seven years to have the drains and fittings tested by the local authority, or at his option by a properly qualified surveyor. In the case of a property let for longer than seven years this duty should devolve on the lessee.

Mr. E. H. Winkworth, Brighton.

1. In an ordinary case where the letting of an unfurnished house is concerned the intending tenant invariably stipulates for the drainage to be approved by his surveyor and any necessary work done. In furnished houses I am supplied with all available information. It would be advisable to have a proper certificate from a thoroughly qualified surveyor.

2. The sort of information which would be valuable could be furnished by a plan of the sanitary arrangements, water-supply and fittings, together with a proper certificate of efficiency from time to time. Many of my clients have an annual inspection, including a test of the drains by water pressure. I consider this a good arrangement.

3. Yes, certainly.

4. This is an implied covenant with furnished houses.

5. I consider that if the drainage or water-supply is defective in any way it should be remedied irrespective of whether the house is for letting as a whole or in part, or for long or short periods.

6. The course which appears to work best is to offer every facility to tenants or purchasers to have a thorough inspection and test made by their own surveyor. All houses building in Brighton have to expose the drain, and test with water to the satisfaction of the town authorities. Even in a properly drained and fitted house trouble will occur unless servants are carefully instructed, and I think it essential to have printed directions.

Messrs. John D. Wood and Co., London.

1. Owners find it advantageous to themselves to put forward sanitary conditions when of approved plan and construction as one of the attractions of their places. Buyers and tenants are increasingly particular as to sanitary conditions, and make their offer subject to a sanitary survey, carried out by a surveyor at their own expense.

2. (*a*) In our printed form we ask the questions, Are the sanitary arrangements on the modern principle, and who planned and superintended the works? (*b*) Has the house been drained on modern principles?

3. We advise buyers or tenants to supplement by a detailed survey.

4. Should be extended to property having a rental of £40 per annum, but not further. For better class property sanitary condition should be a matter of mutual agreement.

5. Fully. All hotels and houses where lodgings are let should come under Section 12 of the Housing of the Working Classes Act.

6. For the last fifteen or eighteen years great stress has been laid on sanitary conditions, and in the West-end it is almost impossible to let a furnished house unless the sanitary arrangements have been reconstructed. This also applies to country houses, but to a less extent. Speculators in house property recognise this fact, and take care that the sanitary arrangements of a house are in good order. We think that a recognition of a minimum of sanitary requirements (legal or otherwise) would be helpful in inducing owners to bring their houses up to the required standard, leaving for private agreement the elaboration of details, such as irrigation, grease traps &c.—antisyphonage, disconnecting and inspection chambers.

It should be imperative that all who execute sanitary works or superintend their execution should give a certificate showing works executed and manner of execution, illustrated by a plan, this certificate and plan to be producible on demand.

SUMMARY.

From the amount of information which we have placed before our readers two facts must have become apparent to them. (1) That there is a vast amount of ignornnce abroad, both amongst landlords and tenants, as to what sanitary

conditions should be fulfilled before a house may be considered habitable; (2) that sanitary defects are largely prevalent in houses in all parts of the country, especially in those erected before the adoption of the Local Improvement Acts or Model By-laws, and that some reform is necessary in the law and practice of house-letting for the better protection of tenants, and, we think, in the end for the advantage of landlords also. To attain this desirable result, however, some plan must be evolved, which, while affording effectual protection to the tenant, will not inflict a positive injustice on the landlord. Some of our correspondents have urged that the matter is entirely in the hands of the tenant, and that as it is the duty of every man to look after himself no further legislation is desirable. It is contended by them that all a proposing tenant has to do is to call in his own surveyor and be satisfied by an expert opinion that the drainage is in good order. One gentleman, insisting strongly on this plan, compares the taking of a house to the purchase of a piano, in which he says a man takes the precaution to satisfy himself that he is getting his money's worth, and he asks why he should not apply the same laudable rule in the matter of his house. It appears to us, however, that whereas in the former case a man may get his opinion gratis, in the case of a house he must pay in order to find out whether the article offered is genuine. We must confess that we cannot see why a landlord who spares no trouble to put the rest of his house in order should systematically overlook the condition of the drains, or pass them over with the statement that they are "all right" or "have given no trouble." Nor are we able to appreciate the logic of the rule which says that the tenant must pay for the privilege of pointing out to the landlord that he is letting a house with the drains out of repair.

Granting, then, that reform is necessary, it appears to us that the desired improvement might be obtained in one of three ways: (1) By a combination of house agents and surveyors; (2) by further legislation; (3) by awakening sanitary authorities to a sense of the power already entrusted to them, and requiring them to develop their latent authority for the public benefit.

Regarding the first suggestion it has been pointed out that agreement between the leading firms of house agents would be difficult to accomplish, and when effected would not be binding on anyone except themselves. Moreover, the owner would always have it in his power, supposing the verdict were against him, to appeal to some firm outside the union. With this opinion we entirely agree.

In the event of the desired end being attained by further legislation we presume that some such Act as the Sanitary Registration of Buildings Bill, introduced by Dr. Farquharson into the late Parliament, would be requisite. Probably before a house could be put on a "sanitary register," the landlord would be compelled to place the drainage of his house in conformity with the requirements of the Bill. This would effect the improvement by a sweeping and revolutionary change, and, while meeting with disfavour amongst landlords, would probably entail no little trouble on the sanitary authorities. We would suggest that some more gradual innovation should first be attempted.

We are now left only with the law as it stands, and we are driven to ask whether, in spite of the evils which appear to flourish under it, it does not hold out any hope of assistance by more efficient administration and a more complete use of its powers. We venture to think that it does; and in the course of this report we have already instanced cases where it has done so. Under the Metropolis Local Management Act, 1855, Section 202, the London County Council is empowered to make by-laws "for regulating the dimensions, form and mode of construction, and the keeping, cleansing and repairing of pipes, drains and other means of communicating with sewers, and the traps and apparatus connected therewith." Other sections of this Act empower the vestries and district boards to require houses to be drained, and by Section 82 the sanitary authority is granted power to inspect at any reasonable time during the day any drain after twenty-four hours' notice in writing had been given to the occupier of the premises. By Section 39 of the Public Health (London) Act the County Council is required to make by-laws with respect to waterclosets, earth-closets, privies, ashpits, cesspools—whether constructed before or after the passing of the Act, and the sanitary authority to make by-laws with respect to the keeping of waterclosets supplied with sufficient water for their effective action. Every sanitary authority is moreover required to observe and carry out the by-laws under this section. By Section 40 of the same Act the sanitary authority is given the same power of entry and of inspection of waterclosets, sinks, traps &c. as was conferred by Section 82 of the Metropolis Management Act in respect of drains, and they can enforce whatever alterations appear necessary. By the Public Health Act, 1875, Section 157, every urban authority was empowered to make by-laws "with respect to the drainage of buildings, to waterclosets, earth-closets, privies, ashpits and cesspools in connexion with buildings, and to the closing of buildings or parts of buildings unfit for human habitation" &c. Again, the Public Health Acts Amendment Act of 1890 enables these by-laws to be made to affect buildings erected before the Local Government Acts came into force in the district. We see, then, that in the matter of sanitation the law makes the local authority practically supreme if it cares to exercise its rights, for it is not only permitted entry at any reasonable time during the day if dissatisfied with the sanitary condition of any house, but it may frame by-laws and enforce them with respect to sanitary appliances.

Now the plan which appeals to us most strongly, and one which appears most likely to secure the desired end most easily and smoothly, is that which has already been put in action with successful result at Eastbourne. By this method the local authority offers to grant certificates to landlords if their houses come up to their standard of sanitary excellence, and houses so certificated are put upon the register of the local authority. The sanitary authority has acted most wisely by making the registration a voluntary one, for by so doing they have converted what might have been looked upon as a grevious hardship into a mark of distinction. As was to be anticipated, landlords have not been slow to avail themselves of the privilege, for it necessarily affords them a better chance of letting their houses; and we have little doubt that in time the majority of houses will have been put on the register.

Having agreed that it is desirable that the local authority shall institute a plan of registration of houses after the granting of their certificate, we have next to consider how this certificate shall be gained. The various means of certification that we have come across in this inquiry are: (1) By the builder; (2) by the surveyor; (3) by sanitary associations; (4) by the local authority, who shall be the sole surveyors. We scarcely think it advisable that the local authority should accept certificates from builders, surveyors or sanitary associations as qualifications for registration; for however honourable are the majority of men engaged in these professions, such a plan has of course very evident shortcomings. Much as we should disapprove of this suggestion being carried into effect, we still more dissent from the one which constitutes the local authority the sole surveyor; if by surveying be meant the planning and laying down of drains, for this would evidently strike at the root of private enterprise, and would be an intolerable injustice. We should rather suggest that every sanitary authority should issue a code of by-laws setting forth its standard of sanitary excellence. The work should be carried out by private agency, but when finished should be passed by the surveyor or sanitary inspector of the local authority; and if the report be satisfactory a certificate to that effect should be granted and signed by the person who inspected the house. It would also be advisable on obtaining the certificate that a plan of the drainage should be deposited with the local authority, which should be open to inspection at some future time on payment of a small fee.

While we would advocate the system of voluntary registration for private houses, we think that in the case of hotels, lodging and boarding houses registration should be compulsory. Our remarks would apply with especial force to seaside places and health resorts, whither people go in search of health, and find perchance, instead, a sick bed or something worse. In houses of this class the public have not the opportunity, however capable they may be, of satisfying themselves about sanitary conditions, and it is therefore only fair that they should be protected to the fullest extent. Once having gained a certificate from the local authority, how long shall it be considered to hold good? We would suggest that in the case of hotels, lodging and boarding houses the renewal should be annual, the fresh certificate being granted provided no nuisance has arisen in the interim. Private houses, we think, might be certified at each change of tenancy, notice being sent to the local authority when this occurs, or, in the case of long tenancies, at intervals of not more than seven years' duration.

A TABLE SHOWING THE OPINIONS OF 136 HOUSE AGENTS UPON THE SEVERAL QUESTIONS SUBMITTED TO THEM FOR THE PURPOSE OF THIS

A TABLE SHOWING THE OPINIONS OF 136 HOUSE AGENTS UPON THE SEVERAL QUESTIONS SUBMITTED TO THEM FOR THE PURPOSES OF THE LANCET INQUIRY.

Questions.	Yes.	No.	No answer.	None asked or given.	Vague information.	No answer.	Certification.	No answer.	Plans and certificates.	History of houses.	Sanitary tests.	Improvement Acts.	Yes.	No.	No answer.	Yes.	No.	No answer.	Apply equally.	Do not apply.	No answer.	Make suggestions.	No suggestions.
	I.	I.	I.	II. (*a*)	II. (*a*)	II. (*a*)	II. (*a*)	II. (*b*)	II. (*b*)	II. (*b*)	II. (*b*)	II. (*b*)	III.	III.	III.	IV.	IV.	IV.	V.	V.	V.	VI.	VI.
I.—Do you consider that in an ordinary case you are supplied by your clients with all the information which is desirable concerning the sanitary history and condition of houses entrusted to you for letting?	9	107	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
II.—Would you illustrate by imaginary examples (*a*) the sort of information on these points which you are accustomed to receive, and (*b*) the sort of information which in your view could and should be furnished?... ...	—	—	—	7	81	41	7	34	81	5	12	4	—	—	—	—	—	—	—	—	—	—	—
III.—Are you prepared, of course with the client's permission, to make and obtain an efficient and independent survey of the house and its sanitary arrangements? ...	—	—	—	—	—	—	—	—	—	—	—	—	103	14	19	—	—	—	—	—	—	—	—
IV.—Do you consider it desirable that the provision of Section 12 of the Housing of the Working Classes Act of 1885, which makes it an implied condition in the letting of a tenement that it shall be reasonably fit for human habitation, should be extended to all dwellings without distinction?	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	94	23	19	—	—	—	—	—
V. — How far would your opinions expressed above apply to houses and lodgings let for short periods at seaside places and health resorts?	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	107	3	26	—	—
VI.—If any points occur to you in this connexion which are not already covered please mention them here.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	80	56

A landlord having satisfied his tenant by the production of the certificate of the local authority, that the drainage of his house is in thorough order, we hold that he should be exonerated from all responsibility in the event of mischief occurring during the tenancy. On the other hand, should the tenant wilfully cause a stoppage of a drain the landlord is protected by Section 15 of the Public Health (London) Act, which imposes on the tenant a penalty of £5; while for damage to sanitary appliances he is by Section 41 of the same Act liable to a fine of £10; and if he does not abate the nuisance within fourteen days to a fine of twenty shillings for each day during which the offence continues. It has been suggested that schools, public and private, should be inspected and reported on as regards their sanitary condition. This is an important suggestion, and one which we should be glad to see carried into effect.

Through the kindness of several house agents we have had forwarded to us copies of the printed form of agreement usually employed by them in the letting of furnished houses, and we have been much impressed with the fact that none of them contains any direct allusion to the subject of drainage, although space is left in some in which the tenant may make conditions regarding sanitation. We would submit that stipulations regarding the drainage should enter into every agreement in the letting of a furnished house, and would suggest the following as a model form:—

Memorandum of an agreement made and entered into this.....day of.....one thousand eight hundred and....., by and between..... of....., auctioneer and valuer, house and estate agent, acting as agent for.....of the one part and..... of....., heirs, executors, administrators or assigns of the other part as follows—that is to say, the said .....hereby agrees to let, and the said.....hereby agrees to take all that messuage or dwelling-house and premises, situate and known as....., together with the furniture, glass, china and effects now therein, as per inventory, from the.....for the period of....., *the landlord guaranteeing that the sanitary arrangements of the said messuage, dwelling-house, and premises are in thorough order* .....; and the said..... further agrees to pay the said rent..... (Here follow the usual stipulations regarding rent and right of re-entry of the agent in case of default of payment.)

The Editors of THE LANCET have pleasure in acknowledging the receipt of replies to their circular from the following firms of house agents and surveyors, and thank them for the kind assistance they have afforded them during the work of the Commission:—

Mr. J. Adam, Dublin.
Messrs. Alder and Co., London.
Messrs. Baker and Son, Hastings.
Messrs. Ball, Norris and Hadley, London.
Mr. H. Barnwell, Birmingham.
Mr. T. C. Barralet, Richmond.
Messrs. Barratt and Co., Leamington Spa.
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Mr. T. G. Wharton, London.
Messrs. Williamson and Son, Guildford.
Mr. E. H. Winkworth, Brighton.
Messrs. John Wood and Co., London.
Mr. F. Woodman, St. Albans.

ANNUAL REPORT OF THE SANITARY COMMISSIONER WITH THE GOVERNMENT OF INDIA FOR 1890.[1]

THESE voluminous reports which are annually drawn up in the office of the Sanitary Commissioner with the Government of India embody a vast amount of information. They deal with the sickness and mortality among the European troops, native army, prisoners, and general population of India, and the tables and returns are so compiled and arranged and ingeniously thrown into such groups and forms as to afford information to a statesman, Government official, or medical officer on a variety of subjects about which it is sometimes very essential for him to know a good deal. Information regarding the birth, death and sick rates of the enormous native populations of India—over 280 millions of people—is confessedly unreliable. Our systems of registration are at present so imperfectly carried out there that it cannot be otherwise. But the statistical data obtained from the British and native troops and the gaol population are trustworthy and serve as a gauge and check on the returns furnished from native sources. The late Dr. Bryden may, we believe, be credited with having created the statistical department and with having in a great measure designed the valuable tabular statements that have been continued in these reports since his time. If the reader turns to that portion of the report and appendix appropriated to the European troops in India, he will see—to take a few samples of the kind of information afforded—that the geography and topography of diseases, the influence of season, the comparative ratios of sickness and mortality of the armies of the three presidencies and of the different districts and chief military stations in them, the vital statistics of hill stations, the relation of disease, and of certain diseases in particular, to age and length of service, the gain and loss of strength of corps, and the vital statistics of the women and children of European regiments, are all set forth. To proceed, however, to the report itself. After the usual summary of the meteorological phenomena for the

[1] Government Printing Office, Calcutta, 1892.

year 1890 we come to the section on the European army in India as a whole. The sickness was greater than in the previous year, though the mortality was much less. But for the epidemic of influenza the year would have been a fairly healthy one. Influenza caused an admission rate of 33 per 1000, pneumonia one of 4·6, against 2·6 in the previous year, and other respiratory diseases 35, against 29 per 1000 of the previous year. Venereal diseases caused 33 per cent. of the total sickness, and ague 23 per cent. In all three presidencies venereal diseases head the list, show higher ratios than in the previous year, and much higher than in the decennium. Enteric fever caused 36 per cent. of the total deaths, against 37 per cent. in the preceding year. Of the three presidencies Bombay shows the lowest ratio of sickness and of deaths, Bengal the highest in both these respects.

In 1890 India shared in the pandemic of influenza, which first showed itself epidemically in Russia in September–October, 1889, and thence spread over Europe, reaching its height there in December. The facts set forth in the report are interesting, and we may therefore briefly advert to them. The first cases in Egypt were noticed in the last half of December. In India a few cases are returned as influenza every year, and in 1889 the cases so returned amounted to 5 among European troops, 7 among native troops and 33 among prisoners, the last representing a curious isolated outbreak in August, 1889, among the prisoners of the Thayetmyo gaol; and not only were the prisoners affected by it, but members of the gaol guard and gaol establishment also. In Bombay and Calcutta cases were first noticed in February, 1890, in Rangoon and probably Madras in the middle of March; but the Sanitary Commissioner, North-Western Provinces and Oudh, states that influenza was epidemic in the Jalaun district from the middle of January and in the Bijnor district from February. The area covered by the disease was very large, extending, in fact, over nearly the whole of India. It affected European and native troops and prisoners and the natives themselves, only the statistical evidence in regard to the latter is necessarily meagre and unreliable. Its general prevalence was confined within very narrow limits of time, commencing with few exceptions in March, attaining its maximum in April and then disappearing. It seems to have been less prevalent among the women and children than among the men of European regiments. There was, of course, a great increase of pneumonia and pulmonary disease concurrent with or immediately following the epidemic. The disease was attributed to importation by many observers. The number of admissions to hospital affords no idea of the numbers affected by it. At one station the medical officer estimated that as many as 30 per cent. of the garrison was affected; at another the estimate of the medical officer was even 80 per cent. Although the general mortality of the European army was not raised by influenza directly, the death-rate from pneumonia and respiratory disease was markedly increased and no doubt attributable to it as a cause. In some cases it is noted that the Europeans suffered much less severely than the natives in the same station. It is of interest to learn, on the authority of the principal veterinary officer in India, that there was no preceding or concurrent epidemic, like or unlike influenza, among horses.

Passing over other diseases, we turn to the grave and important subject of enteric fever. The remarkable liability of the young and newly arrived soldier in India to this fever—and especially of the soldier recently arrived there—is an acknowledged fact which has been thoroughly threshed out. But the true cause has still to be sought. It cannot be imperfect drains and sewer air, because there are no sewers in India to befoul the air or leak into the water-supply, and it has never yet been actually demonstrated that the natives of India commonly suffer from the disease—at any rate, to anything like the extent that Europeans do—and distribute its germs broadcast over the bazaars and native villages. Still, the opinion among medical officers in India is that the enteric fever of that country, however masked its clinical features may sometimes be by climatic conditions, is essentially the same in pathology as the corresponding fever in Europe. In this opinion they are no doubt right, and it seems only logical to suppose that the self-same cause which produces the disease in the one country must be operative in the other also if we could only find it out and, having discovered it, track it home to its haunts and show what it is, how it originates, in what and under what conditions it grows and develops, and how it gains an intrc-duction into the human body.

Our thoughts naturally turn to the latest discovered typhoid bacillus. If this proves to be the *vera causa*, or the agent through whose instrumentality a process is set up in the tissues productive of a poison or ptomaine, then we may possibly have found a pathway leading to an assured basis of scientific fact to which we can relegate the etiology of typhoid fever and learn the why and the wherefore of the disease and the best way of preventing it.

Since the last report specimens of three more cases occurring among European soldiers in Lucknow and Fyzabad were submitted, we are told, to Professor Fischer of Kiel, in one of which he had found the bacillus, but had not yet reported as to the others. Specimens of spleen and mesenteric glands from the case of a native soldier who died of a fever diagnosed as enteric were also forwarded, but Professor Fischer failed to demonstrate the presence of the bacillus in a number of sections he had made. The truth of the assertion that the same enteric fever occurs among natives as among Europeans has therefore yet to be demonstrated in this direction. On the other hand, Dr. Justyn Karlinski has published two cases in which the symptoms were anomalous and no intestinal lesions were present, and yet a bacillus was found by cultivation from the spleen and other internal organs; and another in which with only an old cicatrix in the intestine the bacilli were recovered from the blood by cultivation. This observation opens up a wide field of inquiry, and we quite agree with the Sanitary Commissioner with the Government of India that, if confirmed, it will still more emphasise the need of bacteriological examination of Indian cases. These investigations, it is pointed out, can only be carried out in properly equipped institutions by trained observers with the necessary combination of leisure and apparatus. It is time that the see-saw of asseveration and the promulgation of hypotheses should be replaced by results obtained by some exact and systematically pursued methods of inquiry. We have all along contended that something of this kind should be done, and, what is more, we consider that it would be well at the same time to set about some practical sanitary inquiry and to organise some sort of public health department in India, with local head centres at the several districts or larger military stations, to undertake and report upon any outbreaks of this disease at the time of their occurrence. We should also like to hear that samples of water taken indiscriminately from barrack-room filters had been chemically analysed and submitted to bacteriological tests. A primary question that requires to be practically decided is as to the prevalence or not of enteric fever among the native population. Is it among them a disease of infantile life or not? Our own personal experience is rather corroborative of the opinion of those who hold that true enteric fever is relatively rare among infants and young children in England. To what is the alleged immunity of the native as compared with Europeans from enteric fever attributable? To an acquired tolerance or what? The sanitary commissioner has himself suggested numerous subjects for inquiry, and it should not be difficult to formulate instructions for conducting such an investigation. We earnestly hope to see it done. In the following table the admission and death-rates per 1000 from enteric fever in the European troops, native troops, and gaols of India are compared:—

—	1877 to 1886.		1890.	
	Admissions.	Deaths.	Admissions.	Deaths.
European troops ..	8·9	3·15	18·5	4·91
Native troops	0·2	0·10	0·1	0·07
Gaol population ..	0·2	0·10	0·2	0·09

The percentage mortality of enteric fever in deaths from all causes in 1890 was 35·5 for European troops and 0·4 for native troops. Of one thing there can be no doubt in the meanwhile—viz., that the soldier recently arrived in India is far more apt to die from enteric fever than he who has been longer in the country, and that with increased service in India the liability to death from enteric fever rapidly diminishes. In 1890 the percentage of liability in the case of soldiers during their first and second years of service was 66·47, as compared with 14·13 of those from the sixth to the tenth year of service—a very striking difference.

Passing on to the section dealing with the general population of India, we find that cholera was widely distributed in the year 1890. No province was exempt from epidemic

cholera, and the only large area that entirely escaped was the north-west frontier of the Punjab. There were only a few cases in the eastern parts of the central provinces and the coast districts north of Madras. The total number of deaths recorded was 297,443, which is much less than in the previous year, viz., 428,923, though rather more than in 1888. The report contains a table of the annual deaths from cholera in India from 1887 to 1890, from which it will be seen what a terrible scourge this disease is in India. For the year 1890 the province of Bengal (excluding Calcutta) heads the list in the number of population and deaths from cholera; next the North-West Provinces and Oudh; and Madras stands third in mortality; Berar, Lower Burma and Coorg, where, in a population of over 178,000, there were only five deaths from cholera during the year, stand at the bottom of the list. With regard to the causes assigned by different observers for various outbreaks of this disease we may mention that unprotected water-supply and contaminated water, importation of the disease, its more rapid distribution by the agency of railways and pilgrims are among the more important alluded to. It is to be regretted that in several instances the evidence in favour of a given conclusion is not as precise and complete as could be desired, and the Sanitary Commissioner calls attention to the fact. In the history, for example, of a remarkable outbreak which occurred at a place called Bilaspur the date of the feast is not given. We are not told whether cholera was present in the sixteen villages before the return to these villages of persons who had been at the feast or whether it afterwards broke out among those who had never been there. Again, with regard to the details connected with the alleged more rapid distribution of the disease in the Punjab by railways, it is significantly pointed out that the almost simultaneous appearance of cholera in widely separated districts of a province is no new fact, and that this feature in the spread of the disease through the Punjab is certainly older than most if not all the railways. Cholera, moreover, was already present in Umballa and other districts through which the pilgrims had to pass. At page 148 of the report there is a table, in continuation of those given in past years, showing the percentage of attendants on cholera cases attacked by that disease—viz., 3·15, which seems high. We infer from the report, however, that the circumstances connected with these attacks were not such as to warrant the conclusion that they were attributable to such attendance. The curious instances of localisation of the disease on the one hand and the beneficial results attending the movement of human beings from an affected locality into camp on the other would rather seem to indicate the influence of place instead of persons in the matter.

In the short section headed "General Remarks," Surgeon-Major-General Rice, the Sanitary Commissioner, gives a summary of the events connected with the outbreak of cholera at the Haj in 1890 after an interval of six years' freedom from that disease; of those connected with the quarantine at Camaran; of the interesting circumstances connected with outbreak of cholera in the s.s. *Deccan*, the only vessel attacked of thirty ships during the pilgrim season; and of an outbreak on board the s.s. *Malacca* while on her way from Jedda to Constantinople in August, 1890, at the close of the pilgrim season. The concluding paragraphs of this section deal with the scientific memoirs published in connexion with the report. Surgeon-Captain G. M. Giles has, it appears, added in a series of notes some collateral investigations connected with his inquiry into the nature of the disease known as kala-azar and its relation to the life-history of the Dochmius duodenalis. In some of these notes this medical officer has traced out a similar life-history of a closely allied equine parasite, which he believes, in conjunction with two other closely allied species, to have been the cause of a serious mortality among horses and mules at Shillong, and in others he has described a parasite which gives rise to disease of the intestine of sheep, together with a description of two newly observed ovine parasites. Lastly, allusion is made to Surgeon-Captain Charles' account of some specimens which illustrate the life-history and morphology of the Guinea worm. We have only touched on some salient points in our analysis of this report, which contains, as we have said, a vast amount of information ably and lucidly arranged and set forth.

DR. J. DAVIDSON (Uxbridge) has been awarded the Government grant for public vaccination for the first time.

COLOUR-BLINDNESS.

IT was appropriate that Professor Rutherford, the President of the Biological Section of the last meeting of the British Association for the Advancement of Science, at Edinburgh, should select this subject for his address, since colour-blindness was first shown to be of high practical importance by Professor George Wilson of Edinburgh. The lecture was brilliantly illustrated by means both of diagrams and of demonstrations with the magic lantern, which materially added to its interest. After describing the sensory mechanism of sight, including the retina, optic nerve, and the centre for visual sensation, Professor Rutherford showed how the ether waves of a beam of white light can be dispersed by a prism or diffraction grating, and that those able to stimulate the retina are comprised within a range of rather less than one octave, extending from a frequency of about 395 billions per second at the extreme red end to about 757 billions at the extreme violet end of the visible spectrum. The ultra-violet waves in the spectrum of sunlight extend through rather more than half an octave. These, though mainly revealed by their chemical effects, are not altogether invisible, but have a bluish-grey colour. Colours, he pointed out, are commonly defined by three qualities or constants—hue, purity, and brightness. The hue depends on the chromatic effect of frequency of undulation or wave length; purity or saturation depends on freedom of admixture with sensations produced by other colours or by white light; and brightness or luminosity depends on the degree to which the sensory mechanism is stimulated. He admitted the great difficulty that is offered to any attempt at explaining the phenomena of colour-blindness. He adverted to the cases of apoplectic seizure in which partial or complete unilateral or bilateral loss of the colour sense had been observed, and showed how the symptoms supplied evidence: first, that a sense of light does not imply a sense of colour; and, secondly, that the colour sense involves a more highly refined action of the sensory cell than the mere sense of light and form, and is on that account more liable to be lost when the nutrition of the sensory cell is interfered with. Professor Rutherford described the usual method of ascertaining the existence of colour-blindness by means of coloured wools, and showed that the confusions of brown, orange, green, and grey with bright red; of pale red, orange, yellow, and grey with green; and of blue, violet, and green with pink, had all their explanation in the fact that the red-green blind have only two colour sensations, yellow or blue, with a grey or white band in what should be the green part of the spectrum. Another and more striking method of ascertaining what fundamental sensations are absent in the colour-blind—that method, in fact, which was long ago termed "simultaneous contrast" by Chevreul—consists in throwing a beam of coloured light on a white screen, whilst an opaque object is interposed in its path, when the shadow will be found to show the complementary colour. If the light be red, the shadow appears green-blue; if it be green, the shadow appears purple or red, according to the nature of the green light employed. If the light be yellow, the shadow is blue; if it be blue, the shadow is yellow. It must be remembered that the part of the screen on which the shadow falls is not entirely dark; a little diffuse light falls on the retina from the shadowed part, so that the retina and vision centre are slightly stimulated where the image of the shadow falls. The question constantly recurs, Does light stimulate the optic terminals by inducing vibration or by setting up chemical change? Now, from Lippmann's recent researches on the "Photography of Colour" it appears that all parts of the spectrum can be photographed on films of albumino-bromide of silver, to which two aniline substances, azaline and cyanine, have been added. It seems, therefore, reasonable to suppose that a relatively small number of substances can enable all rays of the visible spectrum to affect the retina. Apparently the question becomes narrowed down to this: Do the nerve impulses arise from mere vibration or from chemical change in the molecules of the nerve terminals? The photo-chemical hypothesis has much in its favour. We know how rapidly light can induce chemical change in photographic films, and we know that light induces chemical change in the vision purple in the outer segments of the rod cells of the retina. The fatigue of the retina produced by

bright light is best explained on a chemical theory, but it could also be explained, Professor Rutherford thinks, on a mechanical theory; for even if the nerve impulses produced in the visual cells be merely a translation of the energy of light into vibration of nerve molecules, the nerve impulse has to pass through layers of ganglionic cells before reaching the fibres of the optic nerve, and in these cells it probably always induces chemical change. In concluding what Professor Burdon Sanderson afterwards eulogised as a lecture of the highest interest, Professor Rutherford eloquently observed that in the progress of scientific thought it is especially necessary to keep our minds free from the thraldom of established theory. Theories are but the leaves of the tree of science; they bud and expand, and in time they fade and fall, but they enable the tree to breathe and live.

THE CIVIL MEDICAL DEPARTMENT OF H.H. THE NIZAM OF HYDERABAD'S GOVERNMENT.[1]

SURGEON-LIEUTENANT-COLONEL LAWRIE'S report states that at the close of the previous year, 1299 Fasli, the number of students on the Register of the Medical School was seventy-nine, and that during the session 1891–92 (1300 Fasli) the total number of students on the roll was eighty-nine.

"The Medical School buildings were vastly improved during the year by additions made to them by the British Government. Three commodious lecture rooms were constructed in one handsome block built of granite, and were opened at the commencement of the school session on June 6th, 1891. The old anatomical theatre and lecture room were converted into spacious and well-lighted dissecting rooms, and water was laid on throughout the whole of the school premises from the waterworks of the Residency Bazaars. A large room was built on to the old anatomical lecture room and fitted for a students' library and dining room. A new and convenient room for carrying on animal vaccination from the calf was also constructed and proved a great boon. For the previous five years animal vaccination has been carried out in Hyderabad in accordance with the method of the London Local Government Board; the accommodation both for animals, patients and staff has been insufficient. The work was therefore carried on under extraordinary difficulties, which have disappeared with the opening of the new premises. A new school museum and chemical laboratory were designed by His Highness's Public Works Department in the year 1299 Fasli. They have not been built as the requisite funds have not been provided by his Highness's Government. These additions are urgently needed to complete the school buildings. .... The usual grants of the British and Nizam's Governments were fully utilised during the year, and the library and museum have been kept well supplied with new books, periodicals and appliances."

Under "Hospitals and Dispensaries," Surgeon-Lieutenant-Colonel Lawrie says: "During the prevalence of cholera in Hyderabad, towards the close of the year, four temporary dispensaries were opened in different quarters of the city, and were much appreciated by the poor. The scope of these dispensaries was not confined to the special disease which had called them into existence; but with the subsidence of the cholera epidemic Government directed that only two should be maintained for a year, and that tentatively. ..... Considering the density of the population of the city and the distance of many of the most crowded parts from the Afzul Gunj Hospital, which is the only general hospital to which the sick poor can resort, two dispensaries are quite inadequate for the needs of the inhabitants of Hyderabad. The suburbs, which are scattered over a wider area but have a smaller population, contain 7 dispensaries." The number of patients treated in all the "Civil Hospitals" in the Dominions during the year was in excess of that of the previous year by 49,602. The number of deaths was 339, as compared with 277 of the year before. Of the numbers treated in Fasli 1301, the city hospitals returned 108,518 out-patients and 1955 in-patients, the districts 276,142 and 2314 respectively. 20,111 operations were performed during the year.

It is stated that the number of successful vaccinations performed during 1891 was 76,880. Only one of the four divisions of His Highness's Dominions—viz., Gulburga—is provided with an inspector of vaccination.

"During the year under report the supply of lymph was kept up by means of seventy-four calves; 2167 vaccinations were performed direct from the animals, of which 95·2 per cent. were successful, and lymph was supplied in capillary tubes to every vaccinator in the Dominions and to anybody else who applied for it. The transfer of the vaccination staff in the districts to the control of the revenue officials has been productive of benefit and has secured, as was anticipated, the active co-operation of the revenue authorities.

"In the Afzul Gunj Hospital the number of in-patients, not including the Zanana department, treated during the year 1300 Fasli (1891) was nearly double the average annual number treated up to 1296 Fasli (1886). In 1885 the number of in-patients was 900, including the Zanana department; in 1891 it was 1794 exclusive of the Zanana department. The principal diseases for which patients were admitted were fever and dysentery. The number of fever cases admitted was 384 with 15 deaths; and there were 210 cases of dysentery with 71 deaths. All the dysentery cases which terminated fatally were suffering from the chronic form of the disease. They were, as a rule, brought to the hospital in the last stages of exhaustion and emaciation and nothing whatever could be done to benefit them

"In the hospital 888 major and 6716 minor operations were performed during the year. In the year 1884 (1292 Fasli) there were 140 major and 1100 minor operations. The increase in the number of operations during the last seven years is due in a great measure to the free and safe use of chloroform. Formerly patients dreaded chloroform more than the operation itself and the sight of the chloroform bottle was generally the signal for the patient to bolt.

"Twenty-six cases of abscess of the liver were operated on by aspiration and antiseptic incision during the year 1891. Of these cases four died."

Dr. Lawrie gives a table to show the method of treatment and the results in the twenty-six cases. He adds:—

"The table shows in the most remarkable manner the value of aspiration in liver abscess. The rule in the Afzul Gunj Hospital is to aspirate all cases of abscess of the liver unless the pus is pointing at the surface, and many cases are cured in this way without exposure to the risk of an incision. If incision subsequently becomes necessary, the previous aspiration of the abscess is not found to prejudice the patient's chance of recovery. I may add that tartar emetic is used very freely with excellent results, in large and small doses, in all cases of liver abscess which are not of specific or septic origin."

Dr. Lawrie would appear to be strongly in favour of the treatment of organic stricture of the urethra by Holt's method of dilatation, employing a modified form of dilator designed by himself and manufactured by Messrs. Arnold and Sons. He remarks, "Under no circumstances whatever is *internal urethrotomy* a justifiable operation. It is an unsurgical and unscientific procedure which ought to be banished altogether from practice."

The use of antimony in frequently repeated small doses in mucous diarrhœa depending on catarrhal inflammation of the small intestine in children is alluded to in the report.

"We now," it proceeds, "use antimony in combination with the liquid extract of coto in this disease with very satisfactory results. The extract of coto appears to be almost a specific in acute enteritis, nearly as much so as ipecacuanha is in acute dysentery. In young infants of four or five months old the extract of coto may be given in five minim doses every hour, made up with the mucilage of yusuf gool instead of water. Two or three minims of antimonial wine are added to each dose if the temperature rises above 101° F. Surgeon-Lieutenant-Colonel Ross, who was formerly civil surgeon of Delhi, first called my attention to the value of coto in mucous diarrhœa, and, judging from my own experience of its beneficial action, it ought to be very widely known. No disease is more common among European children in India than acute enteritis and it causes an immense number of deaths every year. It is comparatively rare among Hindu and Mahomedan children. I believe this comparative immunity of Indian children is largely due to their habitual use of opium."

On the subject of opium Dr. Lawrie states his opinion that opium eating or smoking to excess is very uncommon in India. "I came out to India twenty years ago with violent prejudices against opium, which it took a long time to uproot. If opium eating is a vice, it is not to be compared in the harm it does with alcohol. Alcohol destroys the health and leads to crime; opium does neither the one nor the other. All men, and more especially all women, in health are much better without alcohol than with it; but I very much doubt if the same can be said in India about opium. On the contrary, an immense number of people in this country owe their health to opium, and would not only fall an easy prey to disease but would actually suffer in general health if they did not take it."

Dr. Lawrie gives some interesting particulars of the practice of midwifery and of diseases of women and children in the city of Hyderabad, where it is almost entirely in the hands of uneducated dhais:—

"To give an adequate idea of the barbarities habitually practised by these women is impossible. We are only able to judge of a few of them by the cases which from time to time came under our notice. In midwifery the treatment they adopt for cases of hand presentation is either to take a wisp of dry grass and set fire to it and burn the child's hand in order to make it withdraw it into the uterus, or else to wrench it off. If post-partum hæmorrhage occurs the patient is made to stand up against a wall and an old woman butts at her abdomen with her head, like a goat. Numbers of cases of peritonitis and injury of the abdominal and pelvic viscera produced in this way come under our observation every year. The city dhais (midwives) have a superstition that breech presentations foreshadow evil to themselves and hence the child is always born dead from asphyxia in breech cases. The manner in which counter-irritants are employed in the shape of the actual cautery and powerful corrosives like the marking nut is truly shocking.

[1] Annual Report for Fasli 1300, by Surg.-Lieut.-Colonel E. Lawrie, M.B., Residency Surgeon, Hyderabad.

Hundreds of young women are mutilated and die, or are rendered unfit for further existence as married women, by sloughing and faulty cicatrisation of the external organs of generation, owing to the application of the cautery and the marking nut

"One of the commonest diseases in Hyderabad is supposed, according to the uneducated hakims who flood the city, to be dislocation of the navel. So firmly rooted is the idea that this is a real disease that patients who have severe stomach aches and are persuaded that they are suffering from dislocation of the navel, will submit cheerfully to the most painful treatment for its reduction. Quite recently a patient who was suffering from what was said to be an unusually intractable form of dislocation of the navel, was so roughly pulled about by means of a rope passed round his waist and fixed securely by the ends to two pillars that he died of ruptnre of the spleen."

The two principal events of interest during the year are stated to have been the visit of the Leprosy Commission to Hyderabad and the completion of the report of the Hyderabad Commission on Chloroform. The Leprosy Commission were the guests of His Highness' Government. One case was shown to the commission which Dr. Lawrie thinks ought to have gone far to convince them that the bacillian theory of leprosy is untenable.

"A sepoy in the regular troops was admitted into the Afzul Gunj Hospital, while I was in England on privilege leave, on account of anæsthetic leprosy of the whole of the right ulnar area, which, owing to the loss of power, prevented him from using his right hand. He could not cock the hammer of his rifle or pull the trigger. In my absence the operation of nerve stretching was performed, and a portion of diseased tissue from the neighbourhood of the ulnar nerve was submitted to microscopic examination, and found to contain the bacillus lepræ (?) in large numbers. On my return from leave I found a note to the effect that there was no improvement whatever in the patient's condition. The ulnar nerve was enormously thickened and there was considerable inflammatory thickening of the lymphatics in its neighbourhood. The patient was therefore again placed under chloroform and a fresh incision was made, exposing the ulnar nerve for six or eight inches as well as the deep parts of the former incision. The previous incision was found to lead into a nearly dried up abscess cavity in connection with the lymphatic gland above the internal condyle; the ulnar nerve was intact. The thickened part of the ulnar nerve was now laid freely open throughout its entire extent and a quantity of brownish granular material was removed from its interior. When every particle of this deposit had been scraped away the wound in the nerve was sutured with catgut, and the external wound in the skin with horse-hair. The deposit taken from the nerve was examined microscopically by Dr. Bomford, and no bacilli were found in it. When the Leprosy Commission came here this sepoy was convalescent. He is now quite well and performing his duties. He can cock the hammer of his rifle and pull the trigger and the right hand is almost as strong as the left. Sensation is nearly completely restored. In this case the removal of morbid tissue containing bacilli caused no change in the patient's condition. But the removal of morbid tissue containing no bacilli, but which by pressure on the delicate nerve fibres had destroyed the function of the nerve, cured the disease. The bacillian theory of anæsthetic leprosy is in my opinion entirely destitute of foundation. Anæsthetic leprosy is a granulomatous disease of the nerves in and between the nerve fibres. All the symptoms such as the loss of sensation, the atrophy of the muscles, the sores and eruptions of the skin and the loss of tissue by ulceration and sloughing are merely the result of, and are fully accounted for by, loss of function from pressure in the affected nerves, which gives rise to profound alterations of nutrition in the parts the nerves supply. I have operated on the nerves in hundreds of these cases, and have cured a considerable number, and no bacilli have ever been found in any of them. The natives of Hyderabad regard leprosy as the fourth stage of syphilis. The difference between the two however is so self evident that it is surprising how this belief ever arose. If leprosy were a stage of syphilis it would be, as syphilis is, universal in Hyderabad; but it is by no means as common as syphilis, nor is it inoculable. There is little doubt that it is hereditary, and that though lepers may have healthy children, the majority of them must have tainted constitutions."

With regard to the Hyderabad Chloroform Commission Dr. Lawrie very justly and properly alludes to the fact that "the unexampled liberality of his Highness the Nizam has made it possible for the Hyderabad Commission, not only to carry on its investigations, but also to publish them to the world." We gladly avail ourselves of the opportunity of again expressing our own appreciation of H.H. the Nizam's princely and enlightened action in the interests of science. Dr. Lawrie is further of opinion that "this, however, is not sufficient, and if these investigations are to be made of permanent benefit to mankind—if, in fact, the use of chloroform as an anæsthetic is to be continued—the time has come for an interference on the part of the supreme and home Governments, who by means of a Royal Commission could authoritatively lay down the principles which should be followed, and thus remove this most important question from the field of professional controversy and jealousy." We are so anxious that the blessings of chloroform should be secured to the fullest extent for the general good of mankind that we gladly reproduce Dr. Lawrie's remarks and afford them all the publicity at our command. At the same time he will, we feel assured, pardon us if we take exception to the phrase "professional controversy and jealousy," and to the somewhat combatant spirit which pervades his writings on this subject. There should be no such thing as polemics in science—no taking of sides or strong personal feeling, but rather a patient and earnest searching after truth. The facts that Dr. Lawrie has done such great and good service in the past, is doing such admirable work at the present time, and has such excellent opportunities before him, cause us all the more to regret that he is so far carried away by his enthusiasm as to speak constantly of fellow-labourers in the field of science who happen to hold views not in accordance with his own as "our opponents." There must be no internal dissensions amongst those who fight for the same good cause; and we should be indeed glad to see a more wholesome attention being paid to "discipline" by all those who have buckled on their armour to take part in the righteous war which we would all fain wage against disease and suffering.

THE BRITISH DENTAL ASSOCIATION.

THE British Dental Association recently held its thirteenth annual meeting at Manchester. It was welcomed to that city by the mayor, who gave a reception in the Town Hall.

Mr. Smith Turner, the retiring president, was succeeded by Mr. Quinby of Liverpool. The reports of the executive showed the Association to be financially and numerically successful, and also that it had by its efforts caused some attention to be paid to the wants of the Navy from a dental point of view, but that the steps so far made were inadequate both to the wants of the service and to the opinion expressed by the dental profession.

The investigation into the teeth of school children is also bearing fruit and should lead to the appointment of a dental surgeon at all large schools.

The discussion on the best method of relieving crowding of the front of the mouth, whether by removal of the first molars or by extraction of the first or second bicuspids, was a valuable contribution to dental knowledge, the general result being that when any choice were possible the bicuspids, as being nearest the deformity, should be sacrificed.

Some beautiful slides were exhibited on the screen, illustrating the micro-organisms of dental caries and phagocytosis. A large number of demonstrations of a purely technical character were given. The development in this direction is full of danger and should be carefully regulated; only original demonstrations should be admitted, and the ordinary methods of filling or crowning teeth which have no originality should be excluded.

A museum illustrating irregularities of the dental arch and abnormalities in shape and form of individual teeth was carefully prepared and much valued. A report which we understand is to be made should produce some valuable addition to knowledge on the questions.

The microscopic exhibition was exceptionally good and the organiser deserves much praise.

The social part of the meeting was very successful and the Association received every hospitality it could have hoped for. The garden party at Peel Park given by the Mayor of Salford, the conversazione by the Manchester Odontological Society and the entertainment by Mr. Quinby, the President, at the excursion to Buxton, were each in their turn only characteristic of that generous hospitality that is always found in the midlands. A large number of the medical practitioners of the district were present at the dinner.

LUNACY INQUIRY AT DOVER.

AN inquiry was held at the Lord Warden Hotel, Dover, on the 30th ult., before Master Bulwer, Q.C., and a special jury of twenty-three, under a commission and order of the Lords Justices of Appeal as to the alleged insanity of the Rev. F. J. Ramsden of Uffington, near Stamford, Lincolnshire.

The medical and other evidence in the case was not called in question. Mr. Ramsden, jun., gave evidence to the following effect. His father in 1875 had an accident in the hunting field, injuring his spine. Previously to that he was perfectly sound in mind and always conducted himself as he ought to do. Some months after the accident he had a paralytic seizure, and it was at once manifest that his mental powers had been impaired. By the seizure his face on one side was drawn, and he had a difficulty in his speech. After

this he took no notice whatever of his affairs. He kept no account and would frequently carry large sums of money about with him. He would also order a quantity of furniture, for which he had no use whatever. Sometimes witness countermanded the order; at other times he had great difficulty in doing so. His father also sent home large quantities of fish, flowers, fruit and other articles. The food was given to the dog, but sometimes there was such a large quantity sent that it could not eat it, and they had to bury it. His father then had a craving for drink, which increased in 1889, and he frequently got intoxicated. He had kept no account in bulk as to the extent of his father's extravagance, but it had been a large sum, and considerably over £2000 beyond his income, which was about £2000 a year. His conversation at this time was very rambling. He could not talk coherently for any length of time. In the spring of 1891 he was taken to Tunbridge Wells, and after that to St. Leonards. His father treated his mother and himself and sisters with general unkindness and utterly neglected them. He also used very strange language towards them. On some of the hottest days in summer he would insist in making large fires all over the house. While at St. Leonards he wanted to walk about during the daytime with only his night-shirt on and a dress-coat over it. His memory had failed him, more especially since 1889. He had seen his father smoking his fingers and puffing under the impression that they were cigars, and they frequently took them out of his mouth. It was found necessary to have an attendant with him. He would sometimes go to bed with all his clothes on, and had on more than one occasion taken a red-hot poker to his bedroom in order to keep the fires alight. It was found necessary to send him away somewhere, and he was sent to a place near Brussels, to the asylum there, on May 24th, 1892. Witness accompanied his father, and had since corresponded briefly. Witness was the means of saving the sale of a large number of stocks.

The evidence of a number of medical men, both English and Belgian, who had been consulted about the case went to show that Mr. Ramsden suffers from progressive general paralysis of the insane from which he is not likely to recover, and that he is totally incapable of managing his own affairs.

The Master briefly summed up the facts. He said it was a great satisfaction to have heard that it was not drink that always caused these cases of insanity. In this case it was the disease that caused the craving for drink. The law was such now that it provided for cases of this kind, and every sixpence was taken care of.

The jury at once returned a verdict that they were of opinion that the Rev. F. J. Ramsden was of unsound mind, and the Master made the order accordingly.

THE EXHIBITS AT NOTTINGHAM.

To the list of noteworthy exhibits in the museum at the meeting of the British Medical Association at Nottingham which we published last week, may be added the following which we were obliged by considerations of space to hold over:—Messrs. Lynch and Co. had an unusually large and varied show of surgical instruments and appliances of all kinds, showing modifications of instruments and adaptations to various forms of disease. Messrs. Coxeter and Son, had a very important assortment of improved surgical and electrical apparatus; while Messrs. Salmon, Ody and Co., exhibited some excellent single and double trusses, artificial limbs and specimens of all kinds of instruments used in orthopædic surgery. Messrs. Mayer and Meltzer had a large exhibit of instruments, showing recent improvements in apparatus for the treatment of diseases of the ear, nose and larynx. Among other miscellaneous instruments were their nickel-plated metal splints. Messrs. Richardson and Co., besides having a large display of elegant drugs in all forms, showed medicine chests in wood and leather, and also the dispensing cabinet which we described last year. Messrs. Arnold and Son had also a very large exhibition of new and improved instruments, among which was a new form of a tonsil guillotine. Messrs. S. Kutnow and Co. had an excellent display of drugs, including their anti-asthmatic powder and their improved effervescent Carlsbad powder; while Messrs. W. R. Warner and Co. enlisted the attention of the members by their exhibits of antalgic saline, bromo-soda, ingluvin and pills and granules. Messrs. Johnson and Johnson showed their modifications of dressings and surgical appliances of all kinds, particularly those of an antiseptic and absorbent nature. Messrs. Armour and Co. exhibited their well-known pepsine preparations and beef juices. The Maltine Manufacturing Company had a large display of maltine preparations and beef peptones. In this department we also noted the exhibits of the Bovinine Company, and of Messrs. Wyeth and Brother. Messrs. Christy and Co. showed improvements in the manufacture and preparation of oiled silk. They had also a show of spring bougies. The Palma Christi (Standke) a preparation of castor oil, devoid of nauseating or emetic properties, attracted a good deal of attention.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6605 births and 3517 deaths were registered during the week ending Aug. 13th. The annual rate of mortality in these towns, which had been 17·3 and 17·4 per 1000 in the preceding two weeks, further rose last week to 18·0. In London the rate was 17·4 per 1000, while it averaged 18·4 in the thirty-two provincial towns. The lowest rates in these towns were 12·5 in Wolverhampton, 13·7 in Sunderland, 14·0 in Huddersfield and 14·2 in Cardiff; the highest rates were 21·5 in Salford, 22·4 in Bolton, 22·8 in Manchester, 23·3 in Liverpool and 24·2 in Burnley. The 3517 deaths included 681 which were referred to the principal zymotic diseases, against 585 and 623 in the preceding two weeks; of these, 364 resulted from diarrhœa, 121 from measles, 62 from whooping-cough, 52 from scarlet fever, 45 from diphtheria, 35 from "fever" (principally enteric) and 2 from small-pox. These diseases caused the lowest death-rates in Huddersfield, Newcastle-upon-Tyne, Swansea and Gateshead, and the highest rates in Liverpool, Plymouth, Bristol, West Ham, Bolton and Portsmouth. The greatest mortality from measles occurred in Croydon, Sunderland, Oldham and Bristol; from scarlet fever in Cardiff and Plymouth; from whooping-cough in Birkenhead, Preston, Burnley and Portsmouth; and from diarrhœa in West Ham, Portsmouth, Leicester, Burnley, Liverpool and Bolton. The 45 deaths from diphtheria included 35 in London and 3 in Manchester. One death from small-pox occurred in Halifax and one in Sheffield, but not one in any other of the large towns. Five cases of this disease were under treatment in the Metropolitan Asylum Hospitals and 3 in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 3088, against numbers increasing from 1226 to 2995 on the preceding twenty Saturdays; 376 new cases were admitted during the week, against 382 and 346 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined from 185 to 143 in the preceding six weeks, rose to 174 last week, but were 15 below the corrected average. The causes of 59, or 1·7 per cent., of the deaths in the thirty-three towns were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Cardiff, Bolton, Bradford, Leeds, and in ten other smaller towns; the largest proportions of uncertified deaths were registered in Halifax, Newcastle-upon-Tyne, Preston, Oldham and Burnley.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 17·5 and 18·5 per 1000 in the preceding two weeks, declined again to 17·0 per 1000 during the week ending Aug. 13th, and was 1·0 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14·1 in Leith and 14·9 in Edinburgh to 19·8 in Greenock and 20·6 in Perth. The 474 deaths in these towns included 32 which were referred to diarrhœa, 19 to measles, 16 to whooping-cough, 13 to scarlet fever, 7 to "fever," 6 to diphtheria, and not one to small-pox. In all, 93 deaths resulted from

these principal zymotic diseases, against 54 and 83 in the preceding two weeks. These 93 deaths were equal to an annual rate of 3·3 per 1000, which was 0·2 per 1000 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of diarrhœa, which had been 10 and 31 in the preceding two weeks, rose last week to 32, of which 20 occurred in Glasgow and 5 in Greenock. The deaths referred to measles, which had been 19 and 23 in the previous two weeks, were 19 last week, and included 13 in Glasgow and 5 in Edinburgh. The 16 deaths from whooping-cough showed an increase of 5 upon the number in the preceding week, and included 9 in Glasgow and 3 in Edinburgh. The deaths from scarlet fever, which had been 3 and 8 in the preceding two weeks, rose to 13 last week, and 11 of these occurred in Glasgow. The 6 deaths from diphtheria were one less than the number last week, and included 3 in Glasgow and 2 in Paisley. The deaths referred to diseases of the respiratory organs in these towns, which had been 114 and 77 in the preceding two weeks, further declined to 74 last week, but exceeded by 20 the number in the corresponding week of last year. The causes of 27, or nearly 6 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 28·3 and 21·5 per 1000 in the preceding two weeks, was 21·6 during the week ending Aug. 13th. During the first six weeks of the current quarter the death-rate in the city averaged 22·9 per 1000, against 17·9 in London and 16·1 in Edinburgh. The 145 deaths in Dublin during the week under notice showed an increase of one upon the number in the preceding week, and included 6 which were referred to diarrhœa, 5 to measles, 2 to whooping-cough and not one either to small-pox, scarlet fever, diphtheria or "fever." In all, 13 deaths resulted from these principal zymotic diseases, equal to an annual rate of 1·9 per 1000, the zymotic death-rate during the same period being 3·2 in London and 2·6 in Edinburgh. The fatal cases of measles, which had been 8 and 6 in the preceding two weeks, declined last week to 5. The deaths from diarrhœa, which had been 3 and 5 in the preceding two weeks, rose to 6 last week. The 145 deaths registered last week in Dublin included 29 of infants under one year of age and 32 of persons aged upwards of sixty years; the deaths of infants showed an increase of 3 and those of aged persons an increase of 6 upon the numbers in the previous week. One inquest was held and 1 death from violence was registered; and 41, or 28 per cent., of the deaths occurred in public institutions. The causes of 7, or about 5 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

VOLUNTEER MEDICAL OFFICERS.

A Volunteer Medical Officer writes:—"Under existing Regulations Volunteer Medical Officers are required to serve fifteen years before becoming eligible for Field Rank, whereas their brethren in the Militia and Regulars (not counting the Army Medical Reserve) are granted the same after ten or twelve years' service respectively, which appears to be rather unfair to those who give all and receive nothing. Besides this there are many Volunteer Medical Officers who have in previous years held combatant commissions, none of which time is allowed towards promotion. Mindful of all you have done in the past through your columns for the Military Medical Service, it is to be hoped that you will not withhold a helping hand to the junior branch of the service by getting the time for promotion put upon an equality with their comrades in the senior services and by obtaining recognition of *all* commissioned service, whether combatant or otherwise, towards promotion."

ASSISTANT PROFESSORSHIP OF MILITARY HYGIENE AT NETLEY.

We congratulate the army and the Medical School at Netley on the appointment of Surgeon-Captain Firth, F.R.C.S. Eng., to the post of Assistant Professor of Military Hygiene. The officer in question has shown by his prize essays in connexion with the Alexander Memorial Fund, and his contributions to the army medical reports, that he possesses scientific qualifications of a high order, and we feel confident that he will prove an acquisition to the school.

INDIAN TROOPSHIP PROGRAMME.

The programme of movements of Her Majesty's Indian troopships for the season 1892–93 has been published. It is, of course, extremely difficult to arrange the movements of a large number of troops with a limited number of steamers at disposal so that all the men should arrive in India and at home at the most favourable season. As regards those outward bound, it is desirable that young soldiers should not arrive at Bombay too early and highly advisable that they should not arrive too late in the season—that is to say, at the beginning of the hot weather there. We notice that the first outward steamer leaves Portsmouth on September 3rd and arrives in India at the end of that month, which is the very earliest date that can be deemed desirable; the last steamer arrives at Bombay on March 27th, which, as far as considerations of health are concerned, is late for the landing of a number of young soldiers for their first time in India, for they will almost immediately have to encounter the hot season there, and the change imposes a severe test on the constitution. But we suppose that with the amount of transport at command it is very difficult, if not impossible, to arrange it otherwise. We hope that, as far as practicable, the newly-arrived troops will be sent to the hills. As regards the homeward-bound troops, on the other hand, it is important that invalids and sickly men should arrive in this country so as to escape the rigours of this climate in winter and obtain all the benefit they can from the cool season of the climate they are leaving; and it is only right to add that the arrangements are, we believe, made, as far as practicable, with this end in view.

AFGHANISTAN AFFAIRS.

There are a number of officers belonging to the medical staff and Indian medical service who retain a lively, and probably some of them not an altogether pleasant, recollection of Afghanistan from their having taken part in one or other of the expeditions into that country during the last war. Service in Afghanistan is attended with a good deal of sickness and hardship, and many medical officers had a very rough time of it in those wars. It is just as well, perhaps, that the Ameer has requested that the special mission under Lord Roberts should be deferred for the present. Things are evidently very unsettled in Afghanistan—the tribes are opposed to one another and to the Ameer's rule, as well as extremely jealous of any interference on the part of the British.

MOVEMENTS OF THE MEDICAL STAFF.

Surgeon-Captains M. O'D. Braddell is transferred from the Station Hospital, Sheffield, to Derby, for temporary duty, vice Surgeon-Lieutenant-Colonel Francis, M.M.S. Surgeon-Captain Dixon proceeds from Aldershot to the North-Western district on temporary duty. Surgeon-Captain Kirkpatrick has returned to the Station Hospital, Glencarse, from duty at Lanarkmuir. Surgeon-Captain Woods has proceeded from Weymouth to Portland, for duty.

ARMY MEDICAL STAFF.

Brigade-Surgeon-Lieutenant-Colonel John Stannard MacAdam is placed on retired pay (dated Aug. 3rd, 1892). The undermentioned Surgeon-Lieutenant-Colonels to be Brigade-Surgeon-Lieutenant-Colonels (dated Aug. 3rd, 1892):—William F. Stevenson, vice J. S. MacAdam, and Robert N. Macpherson, vice W. Johnston, M.D., retired. Surgeon-Lieutenant-Colonel Charles Barromeo Jennings is placed on temporary half-pay on account of ill-health (dated Aug. 10th, 1892). The undermentioned Surgeon-Captains to be Surgeon-Majors (dated July 31st, 1892):—George H. Sylvester, F.R.C.S.Eng.; William J. Macnamara, M.D.; Daniel O'Sullivan, F.R.C.S.I.; Edwin O. Milward; Chas. R. Woods, M.D., F.R.C.S.I.; Michael F. Macnamara, F.R.C.S.I.; John O. G. Sandiford, M.D.; Robert L. Love, M.D.; Henry W. Murray, M.B.; Michael W. Kerin; Alfred Peterkin, M.B.; James Harran; Edwd. L. Maunsell; Wm. Heffernan; Ranald W. E. H. Nicholson; Jas. G. W. Crofts; William Dugdale; Delaware L. Irvine; Edwd. R. Cree; Maurice O'C. Drury; James H. Nicholas; Denham F. Franklin, F.R.C.S. Edin.; and Herbert Saunders. The undermentioned Surgeons on Probation to be Surgeon-Lieutenants (dated July 27th, 1892):—Harry Alexander Hinge; James Gibson McNaught. M.B.; Hubert Alaric Bray; Thos. McDermott, M.B.; Edwd.

Wheeler Slayter, M.B.; Hugh Stanley Thurston; Lancelot Paxton More, M.B.; Charles O'Connor Hodgens; Arthur Frederick Tyrrell; William Phayer Ryall; Theophilus Percy Jones, M.B.; George Stanley Walker, M.B.; William Johnson Smyth, M.D; William Douglas Erskine, M.B.; Albert George Thompson, M.B.; Alexander Jasper Chambers; George Abraham Moore, M.B.; Richard Crump Lewis; Reginald Francis Edmund Austin; Henry Wm. Hutchinson O'Reilly, M.B., Nicholas Marder; Edgar Hunt Condon, M.B.; Gerald Stewart Mansfield, M.B.; Frederick George Faichnie; and Harold William Kingcombe Read.

Surgeon-Major Stephen Massett Webb, M.D., late of the 36th and 23rd Regiments, who died on the 3rd inst. at Plymouth in the sixty-fourth year of his age, obtained his appointment as an Assistant Surgeon in the Army on May 19th, 1854, and retired in July, 1876, with the rank of Surgeon-Major. He served at the siege of Sebastopol during the winter of 1854–55, and was awarded the medal with clasp and Turkish medal.

NAVAL MEDICAL SERVICE.—The following appointments have been made:—Surgeons William H. Norman to the *Blonde*, John S. Fogerty, M.D., to the *Banterer*, and Fredk. W. Parker to Plymouth Hospital (all dated Aug. 13th, 1892).

VOLUNTEER CORPS.—*Rifle:* 1st (Hertfordshire) Volunteer Battalion, the Bedfordshire Regiment: Surgeon-Captain D. B. Balding (Honorary Surgeon-Major) to be Surgeon-Major (dated Aug. 13th, 1892).—1st Volunteer Battalion, the Gordon Highlanders: George Maitland Edmond, M.D., to be Surgeon-Lieutenant (dated Aug. 13th, 1892).

Correspondence.

"Audi alteram partem."

"ASPIRATION IN PNEUMOTHORAX."

To the Editors of THE LANCET.

SIRS,—I have read with great interest Professor Gairdner's further communication on the above subject in your issue of July 30th, and regret to find that he still considers the treatment I employed "a dangerous error in practice." Dr. Gairdner states that on the removal by aspiration of intra-pleural pressure, which in the case related was the same as that of the atmosphere, there is a reversal of pressure, which, instead of being from without, is now from within the lung. To this it may be replied that the intrapulmonary pressure is constant, being the same as that of the atmosphere, as long as tranquil breathing is maintained. Consequently air does not "rush in force along the still pervious bronchi," and far less is there a positive pressure in the lungs such as is present in the example cited, that of a lung placed in water and forcibly inflated by air blown in through a bronchus. This last illustration is applicable only when cough is present—that is to say when the principle of the force-pump is brought into action by forcibly compressing the lungs, and at the same time closing the glottis. In the case related there was no cough during or after the aspiration. Dr. Gairdner's argument is based on the supposition that the pleural cavity was suddenly emptied of air, and the collapsed organs suddenly re-expanded, and as this was far from being the case it may be as well to describe the method employed more minutely. A very slight exhaustion of the receiving bottle was made, the connection was opened to a small extent, and a short puff of air was heard to enter the bottle. The heart and pulse were then examined and the process repeated, until from the condition of the pulse and respiration it was concluded that the immediate danger of syncope had been averted. The dangers anticipated by Dr. Gairdner are theoretical, for he has never aspirated in pneumothorax, but instead he is content to argue from the occurence of pneumothorax after aspiration in pleuritic effusion. Is this at all a parallel case? The presence of air in the pleural cavity during or after aspiration in simple pleuritic effusion is usually ascribed, not to a rupture of the visceral pleura, but to the entrance of air from outside through the parietal pleura, owing to a faulty apparatus or a faulty operator, or both.

I am, Sirs, yours obediently,

Carlton-hill, N.W., Aug. 1st, 1892. G. A. SUTHERLAND.

To the Editors of THE LANCET.

SIRS,—In your issue of July 30th Professor Gairdner condemns this operation as "a dangerous error in practice." His chief objection is the oft-quoted one, that aspiration in pneumothorax tends to reopen the fistulous track, which is in process of closure by lymph deposit. He says:—"I am not setting it forth as a theoretical risk, but as one which *I have known to occur;* not indeed in pneumothorax—for I have never aspirated in pneumothorax—but in pleuritic or empyematous effusions. I have known the aspiration of these *immediately* followed by pneumothorax, indicated by a succussion sound which was not present before the operation." In the absence of further evidence, and as Professor Gairdner expressly states that these were not primarily cases of pneumothorax, I fail to see that the presence of a succussion sound after aspiration for fluid is proof that a "kindly veil of lymph," protecting an opening from the lung into the pleura, has been torn. The succussion sound might equally well be due to the entrance of air into the pleural cavity from outside, during or at the end of aspiration, an accident which frequently attends aspiration, which always occurs after free incision, and which is unimportant provided that the air is pure.

If, on the other hand, a true pneumothorax in cases of effusion was produced in the manner which Professor Gairdner describes he would be justified in condemning aspiration for fluid as strongly as he condemns aspiration for air. Professor Gairdner further denies that aspiration in pneumothorax can produce re-expansion of the collapsed lung. But aspiration in Dr. Sutherland's case was followed at once by re-expansion of the lung and return of the heart and mediastinum to their normal position, with prompt relief from the symptoms which threatened death. I am far from advocating the indiscriminate use of aspiration in all cases of pneumothorax, but as I believe that the object of treatment should be to procure re-expansion of the collapsed lung and relief to the heart, which threatens to fail from its sudden malposition, so I think it is justifiable in urgent cases where simple puncture is of no avail to aspirate even at the risk of reopening the fistula. The death-rate from pneumothorax is too high to warrant us in adopting the expectant method of treatment. At the same time if the urgent symptoms are relieved by puncture I should be only too glad to leave well alone.

I am, Sirs, yours truly,

LEONARD G. GUTHRIE.

Upper George street, W., Aug. 7th, 1892.

NOTIFICATION OF INFECTIOUS DISEASE.

To the Editors of THE LANCET.

SIRS,—You remark that "our first duty in the light of the requirements of the Act is to perfect our skill in diagnosis," and you lament an apparent increase of errors in diagnosis among the cases notified. Your suggestions in dealing with the means of improving the accuracy of our diagnostic faculty are good as far as they go, but the fact remains that as long as students are imperfectly taught the things relating to infectious diseases the results of their future attempts, by consultation and otherwise, to ensure accuracy in diagnosis are not likely to become more successful. It is by examination of the causes of imperfect instruction in diagnosis that the remedies for deficient skill may be found. Most truly do you say that the abolition of pupilage is one cause, but you might have gone a little farther and found more to say in this direction. Able students, just qualified, unless compelled by circumstances, avoid more and more the drudgery of private assistantship, and in this they are encouraged by the multiplied inducements held out to them of late years to take junior appointments about hospitals. These appointments afford valuable instruction, but not in that sort of knowledge which is required in general practice, especially in the matter of these infectious diseases; so that from year to year more and more doctors, untrained either by pupilage or private assistantship, find themselves struggling at a disadvantage with the exactions of compulsory notification. You admit that general hospitals show an "increasing ten-

dency to exclude" these diseases, but seem to think that the admission of students to the hospitals of the Asylums Board may compensate for this drawback. If the regulations I saw last year regarding the attendance of students at these hospitals continue in force, I make bold to doubt whether many students can be attracted to avail themselves of this privilege. I find that students are now required by the English Conjoint Board to produce, besides various certificates from their general hospital, evidence of instruction by a teacher of vaccination, and of attendance at a fever hospital and a lunatic asylum, as well as at an eye hospital if the general hospital possess no special eye department. This conjures into the mind's eye a picture of the student, already harassed by frequently recurring examinations and constant attendance at lectures, classes &c., for certificates, further wasting his time in a weary tramp from one (special) institution to another in search of yet more certificates. In fact, Sirs, students are so pestered with examinations and official preparation for them that they cannot be expected to devote their time to any other thing, and as they are not likely to be set down to the diagnosis of cases of diphtheria and small-pox in the examination room, they will pay but little attention to such diseases.

The causes of want of skill in diagnosis of infectious diseases are, then, besides abolition of pupilage—first, the growing unpopularity of private assistantship, to some extent favoured by multiplication of junior hospital appointments; second, the elevation of success at examinations to the first and almost only place among objects to be aimed at by the student; and last, but not least, the unhappy increase of special hospitals, instead of increase of special departments and wards of general hospitals, fruitful of many abuses, but of none more disastrous than its narrowing influence on the education of students. The remedy for this and other evils is to be found in a radical change in medical education and hospital organisation. We have got on to a bad road, and every further step involves us more deeply among the stones and mire.

I am, Sirs, yours obediently,

Derby, Aug. 10th, 1892. G. H. MILNES, M.D. Cantab.

*** Pressure on our space has obliged us to omit the opening paragraphs in this letter, in which Dr. Milnes laments the passing of that portion of the Notification Act which throws the duty on the medical practitioner.—ED. L.

To the Editors of THE LANCET.

SIRS,—Kindly allow me to call your attention to a case which may be of some interest to the medical profession. The facts are these:—

On July 29th a lad, John Weston, aged sixteen, was brought to me at the Queen's Jubilee Hospital by the mother, suffering from diphtheria, for which I duly filled up the notification form and at once handed it to the secretary of the hospital, requesting him to attend to it immediately. The secretary at once telephoned to the Metropolitan Asylums Board, Norfolk-street, Strand, giving them the full particulars of the case, and inquired whether he should "forward the notification as usual," being told in reply, "No, hand it to the nurse when she calls for the case." This was done shortly after. On Aug. 4th a letter was received from Mr. J. E. Cooney, the medical officer of health for Fulham, stating that no certificate had been received, and in reply to which I requested the secretary to say I should be happy to send a duplicate if desired, notwithstanding the fact that the notification had been sent direct to the Metropolitan Asylums Board as directed by them. Mr. Cooney's reply to my letter was a police court summons taken out before Mr. Curtis Bennett. The summons was heard to-day, when Mr. Curtis Bennett held that by handing the notification to the secretary of the hospital I was disobeying the Act and imposed a fine upon me of 10*s.* and costs. It is thus held that a medical man is compelled to either post or deliver the notification himself in person, and failing to do so is responsible. I contended that, having handed the notification to the secretary, a responsible hospital official, who, acting rightly or wrongly, but at all events according to the directions of the Metropolitan Asylums Board, handed the notification to a Metropolitan Asylums Board nurse, my duty of "sending" was properly carried out. As a matter of fact, at the time of certifying I left my clinique to hand the secretary the notification at once, so that no time might be lost, and I cannot help regarding the action taken as being discourteous, especially after my offering to send a duplicate notification if desired.

I am, Sirs, yours truly,

RAYNER D. BATTEN, M.D., B.S. Lond.

Finsbury-circus, E.C., Aug. 12th, 1892.

SCARLET FEVER.

To the Editors of THE LANCET.

SIRS,—A short time since I received a statement from Mr. Munro, the sanitary inspector of the Enfield Board of Health, on the results obtained from supplying the eucalyptus disinfectant for inunction in fifty-four cases of scarlet fever amongst the poor in houses where there were other children. Directions were given for the inunction to be carried out as advised by me in my paper on Disinfection of Scarlet Fever, and although some of the mothers did not do it efficiently because the children objected to the smell, forty-three of the primary cases were not followed by a second. In the other eleven three occurred on the sixth and seventh days after the first, and were most probably infected before the use of the disinfectant; the other eight occurred from two to eight weeks after the first. Most of these may have been infected from other sources, as an epidemic was then prevailing, and all of them occurred after the disinfectant was discontinued. The above shows a percentage of twenty fresh cases occurring in houses within eight weeks where the eucalyptus was used, but with little medical supervision. At Nottingham Dr. Boobbyer stated lately that in 100 primary hospital cases 23 per cent. additional cases occurred in the houses from which they were removed within three weeks; and for every 100 home cases treated, nearly 60 per cent. additional ones occurred. The superiority of this imperfect trial of disinfection by eucalyptus inunction is thus shown to be 40 per cent. better than any other form of house disinfection and 3 per cent. better than that obtained by prompt removal of the cases to hospital and the disinfection of their homes. If the Enfield cases were limited to those that occurred within four weeks after the first (as there was one at five weeks' and two at eight weeks' interval) then only 14 per cent. of additional cases occurred, or 9 per cent. better than under the present system of removal; and if the three already infected cases are also excluded, the fresh cases are reduced to 9 per cent. From all the reports that I receive from medical men who carefully carry out this method of disinfection on the cases and on the children that have been exposed to the infection it is seldom that a second case occurs, and from my own experience a second case does not occur except in those already infected. I am, Sirs, yours faithfully,

Teddington, Aug. 15th, 1892. J. BRENDON CURGENVEN.

ANTHROPOLOGY FOR MEDICAL STUDENTS.

To the Editors of THE LANCET.

SIRS,—I am glad to see Mr. H. Havelock Ellis suggests, in conformity with a resolution of the recent Congress on Criminal Anthropology, that anthropology should form a part of the professional training of medical students. From my twenty years' connexion with anthropological work I am convinced that anthropology would be a popular subject with medical men if they were taught its objects and methods when they were students. There is a great deal of good work being done by medical men which is practically lost to science for want of a central organisation to which it can be referred for examination and publication; and there is a good deal of work being done which is comparatively useless from a lack of elementary knowledge as to the methods, objects and work already done. The need for coördination in anthropological inquiries is shown by the unexpected, and I must add the improbable, results of Dr. Warner's inquiries into the prevalence of physical defects in children in different strata in society. His observations show a higher percentage of defects in the selected, well-nurtured and well-cared-for upper classes than among the poorer classes, whose children are subject to rickets, scrofula, bad or insufficient food and bad sanitary surroundings, results quite opposed to those obtained by the Anthropometric Committee of the British Association, as shown by its final report (drawn up by myself) published in 1883. Mr. Havelock Ellis refers to

various existing institutions where medical students might be taught elementary anthropology, but none of them are available for the purpose at the present time. A few years ago I drew up a scheme for such a school and submitted it privately to some of our leading anthropologists, but I received no encouragement; and later, when the laboratories at the Examination Hall of the College of Physicians and Surgeons were being organised, I suggested that room should be found for an anthropometric laboratory, but to no purpose, as in the present state of medical science it is useless to place the study of the whole living human being in rivalry with the study of a blood-corpuscle, a nerve cell or a bacterium. The museum of the College of Surgeons would be an ideal place for anthropological teaching, as Mr. Ellis suggests, but the present conservative council of the college is not likely to provide such instruction without a good deal of pressure from without. The Anthropological Institute is a learned society which is engaged in collecting and publishing the work of experts, and has no convenience or staff for giving elementary instruction; while the laboratory at South Kensington is rather a collection of models and new inventions which require the hand of the inventor to set them in motion. What is immediately wanted is a scheme showing the relation of anthropology to medical science. Mr. Ellis thinks anthropology would help the students of insanity and other diseases of the nervous system, and this is among the chief uses it has been put to; but it would be of still greater use to the students of public health, especially that branch of anthropology dealing with measurements which is known as anthropometry. Medical men are more immediately concerned with the variations of the complexion, of the senses and of the physical proportions of the body in civilised races and their relations to the conditions under which different classes live, and all these variations can be, and ought to be, defined by measurement; but prehistoric and antiquarian anthropology and the details of the habits and customs of savage tribes are only interesting indirectly to them as travellers or practitioners abroad. Criminal anthropology, about which we have heard so much lately, is based on measurements of healthy, and it may be degraded, but not diseased, individuals, and a comparison of them with other classes of society, especially the class from which they come. (Dr. Clouston, by the way, was in error when he said recently in Edinburgh that no attention had been given to the classes from which criminals come, as he will find if he consults the various reports of the Anthropometric Committee.) It is of little use, therefore, to write papers and make speeches on the desirability of including anthropology in our medical education to lecturers and examiners, who have already too much work on their hands to admit of their entertaining any change if they can possibly avoid it. What is wanted is that Mr. Havelock Ellis, Dr. Clouston and others, who have come to see the importance of such an addition to the medical student's studies, should draw up a scheme of what they want teaching, and submit it to the authorities most likely to carry it out. They must also be prepared to say what part of the curriculum can be omitted to make room for this new subject. Mr. Ellis suggests that botany might be left out, but botany has long since disappeared from the medical schools, and it should be, I think, the anatomy and physiology courses which should make room for anthropology. Might not sufficient time be carved out of that which is at present devoted to microscopic work? The student certainly should be taught that it is a whole living being, and not an infinite fragment of one, that he has to deal with in practice.

I am, Sirs, your obedient servant,

CHARLES ROBERTS, F.R.C.S.

Eccleston-street, W., Aug. 15th, 1892.

THE CLOSING OF THE PUBLIC CATTLE DRINKING TROUGHS.

To the Editors of THE LANCET.

SIRS,—The confession of helplessness conveyed in the circular letter of Aug. 8th from the Secretary of the Metropolitan Drinking Fountain and Cattle Trough Association, stating that "the committee have reluctantly decided to close all their troughs in the metropolitan district for a period of two months" really publishes to civilisation the most scathing reproach on the public health sanitary arrangements of the present day. When we think that this relates to the capital city of the nation which justly stands at the head of all nations for its sanitary appliances and regulations for the protection of the public health I feel that all sanitarians should consider themselves placed on their mettle to remove this reproach without delay. Horses and cattle will now be taken to the troughs attached to many public-houses, which, so far as I can see, are not constructed so as to afford any protection from the spread of the infectious diseases traceable to these troughs; the action therefore, of the committee of the Metropolitan Drinking Fountain and Cattle Trough Association will, it is to be feared, only tend to the spread of glanders, instead of its decrease. Having had, as sanitary officer of a large sanitary circle in India occasion to take special steps for the prevention of the spread of foot-and-mouth disease and glanders among the Government horses and cattle under circumstances which enabled me to exercise a complete supervision over these measures, I can state that, as the result of this practical experience, with a water supply such as is available in the metropolitan district, nothing is more simple than the construction and maintenance of a cattle drinking trough, at a very moderate cost, which will effectually remove the risks complained of as regards the spread not only of glanders but of foot-and-mouth and other infectious diseases. The present pattern of public cattle drinking troughs, though in some respects ill suited to meet the present emergency as regards the prevention of the spread of glanders can yet, I feel certain, by some slight alterations in the mode of admitting the water so far remove these risks as to admit of their being again soon opened. The accompanying pamphlet on the subject, describing the cattle drinking trough on which I experimented in India and which, when exhibited in London, secured the highest award, a silver medal, in the Health Exhibition of 1884, and a special certificate at the Congress of the Sanitary Institute of Great Britain in the following year, fully explains the principles I recommend, and which to a certain extent are capable of adaptation to the present public cattle drinking troughs, and would certainly reduce to a minimum the risk now so generally felt, and thus remove the necessity which has culminated in an action the full consequences of which it is difficult to overestimate.—I am, Sirs, yours truly,

ROBT. PRINGLE, M.D., Brigade-Surgeon.

Blackheath, S.E., Aug. 11th, 1892.

THE DENTAL PROFESSION.

To the Editors of THE LANCET.

SIRS,—At the last gathering of the British Dental Association, which has just concluded its annual meeting in this city, the following appropriate remarks are reported to have been made by Mr. J. Smith Turner, ex-president: "They now had an Act of Parliament constituting them a legal profession, and they wished to take that position, not because that Act of Parliament was passed, but because they wished to educate themselves in such a manner as to entitle them to that legal position." May I venture to suggest that (1) towards gaining that desired position one of the first steps to be taken by those in authority is to put a stop to the unprofessional practice of advertising in the lay papers. The proof that many of these advertisements are injurious to the dignity of the profession and offensive to the more respectable portion of its members is the fact that they repudiate and strongly condemn them. (2) Now that the dental branch has been recognised and accepted as part and parcel of the medical profession it must conform to the rules and usages of that profession if it would gain the end spoken of by Mr. Turner. Neither physicians nor surgeons are allowed by their Colleges to advertise or do anything to lower the dignity of the profession, and although it is humiliating to witness the expedients practised by some of our own members to make known their disgracefully low charges, they are far exceeded by the trashy advertisements which outrage all professional decency, by setting forth the cheap and other advantages which this or that dentist offers to the public. Our public conveyances even are not free from these objectionable and glaring assertions—in fact we meet with them on every hand.

What would the public think of a physician or a surgeon or a lawyer who advertised that his advice, skill or drugs were the very best that could be had for the money, and if they did not give every satisfaction they would be taken back,

exchanged or money returned? If an enterprising and pushing collector of debts happens to write a letter savouring too much of legal phraseology he is pounced upon and fined; and if a person ventures to style himself doctor, surgeon or apothecary without holding the necessary licence, diploma or degree, he courts the same fate and is justly punished. But, more than that; if either a qualified lawyer or doctor is suspected of an unworthy or unprofessional act he is interviewed by his College, and, if found guilty, forfeits his diploma or licence, which alone gives him the legal right of styling himself doctor or lawyer as the case may be, along with all rights and privileges pertaining thereto. If these laws, then, hold good with the legal and medical professions, surely—now the dentists have obtained an Act constituting them a legal profession—they cannot claim exemption from the pains and penalties which follow any wilful disobedience or infraction of the laws made for their guidance and safe personal conduct as members of that profession. If, therefore, any man without a diploma, or who has forfeited the one he held, styles himself "dentist," or uses any name, abbreviation or title leading the public to believe him to be a dentist, he ought to be subject to the same prosecution and consequences which affect the lawyer or doctor. Good, honest, sound work needs no puffing, and the public as a rule do not altogether believe in cheapness. If therefore we, as professional men, hold our work and ourselves "cheap," that is the value at which the public will accept us; and justly so too.

In conclusion I wish to assert that for a member of a legal profession to advertise his name, capabilities or charges is unprofessional, and to advertise himself what he is *not* is illegal. Such men must not be allowed to cast a reflection on the character of the whole body of the profession; and if they cannot intuitively understand the requirements of the profession they must be taught; and if they refuse to learn they must be exorcised from the profession altogether. Advertising "quacks" have been all but stamped out from our particular branch by the strong arm of the law—for where is the man who now dares to call himself physician or surgeon without holding the necessary documents?

I am, Sirs, yours faithfully,

Manchester, Aug. 16th, 1892. HENRY CARTMEL, Surgeon.

THE NEW LUNACY ACT, 1890.

To the Editors of THE LANCET.

SIRS,—Having lately had some practical experience of this monument of legislative skill, I shall be glad if you will allow me to point out a few of the special beauties thereof. It was lately my duty to receive into my house a young lady whom I found, on visiting her, to be in such a condition as rendered her being placed under certificates—a necessary preliminary of my receiving her. At this time she was under the care of a medical gentleman who occupied the position of "usual medical attendant," to quote the words of the Act. Now Section 31 of this Act distinctly reads as follows: "One of the medical certificates accompanying a petition for a reception order shall, whenever practicable, be under the hand of the usual medical attendant, if any, of the alleged lunatic." In accordance with this requirement the gentleman mentioned above signed one of the medical certificates which accompanied the petition to the magistrate. The petition itself was presented by the father of the patient. In course of time the patient was placed under my care, and as in the eye of this law I was no longer a medical man, only a "person having charge of a single patient," it became necessary that a medical attendant under the Act should be appointed. Naturally the father of the patient was desirous that the usual medical attendant, who was resident in my immediate neighbourhood, should undertake this duty. But I had to point out to both these gentlemen that the fact that the usual medical attendant had signed one of the medical certificates deprived him of the right of any longer acting as such, at least in the sense implied in the Act, and that some third medical man would have to be appointed. This appointment was left in my hands, nothing in the Act in any way preventing its being so if the friends of the patient chose. Thus, Sirs, with the intelligence worthy of Earlswood, our legislators, acting entirely, as was supposed, for the protection of the patient, ordain, and rightly enough, that the usual medical attendant shall sign one of the certificates if practicable, and immediately afterwards say to him, "Now you have so signed you are no longer trustworthy; you cannot any more be medical attendant; only strangers now can be trusted by us. So that practically all the protection from ill treatment which the presence of the patient's friend and doctor might bring to bear is carefully eliminated, and had I been a rogue nothing would have been easier than for me and the man whom I had selected to do as we liked with the patient. Her only other protection would have been the Commissioners. But these gentlemen need not visit the patients for twelve months after their reception as lunatics, and when they do so visit them, their apparent object is not so much the wellbeing of the patient as to study in what way the task of the "person in charge" may be made more onerous. In the course of my care of this patient I had one or two more instances of the "ingenuity of stupidity" displayed by the English lunacy law. The patient became much worse, and it became manifest that it was not possible to exert proper control in a private house. Now provision is made in the Act for such an eventuality, another procedure is laid down. A transfer can be effected by the authority of certain persons, among others that of the person who presented the original petition with the consent of the Commissioners.

On the case becoming worse and distinctly urgent, so far as the wellbeing of the patient was concerned, I wired to her father and received in reply his full authority to act as I thought best. I then wired to the Commissioners asking for their immediate consent and stating that I had such authority, also stating the urgency of the case. No reply was received. Time was of high importance. I determined to discharge my patient and have a fresh magisterial order for her reception into a more suitable establishment. To do this I had to find a magistrate. I looked to the Act and found that the persons qualified to act in this capacity in regard to lunatics were "a justice of the peace specially appointed as hereinafter provided, or a judge of the county courts, or a magistrate having respectively a jurisdiction in the place where the lunatic is." I knew that the justice of the peace who had signed the original order was away from home, and I knew no other justice of the peace in the neighbourhood. I therefore went to the nearest police court. I was civilly received and a list of gentlemen qualified to act as justices of the peace, specially appointed, was handed to me, but I was given to understand that they and they only could act in the matter. I went and called on every one of them and not one was to be found. Meantime my patient's case was becoming more dangerous and urgent. It was not until late in the evening of the day that one of these gentlemen was kind enough to come to my house, a distance of nearly two miles, and do what was required. The more credit is due to this gentleman as he was not bound to see the patient, and he had just had a long journey. I was able in consequence of his prompt action to transfer my patient the same night.

Next morning I received a note from the Commissioners to the effect that I must have the enclosed form filled up by the patient's father if her transfer was desired. Of course I could have used an urgency order; but that is a thing to be avoided by all who are acquainted with the Whitehall Board for reasons which need not be recited here. But, Sirs, I think you will agree with me that if justices of the peace are specially appointed and they alone have power to act, as I was informed by the magistrate at the police court, then some arrangement should be made by which they are immediately accessible. Particularly should this be the case in view of the difficulties connected with the urgency order procedure.

Among other improvements of the law which this Act of 1890 was supposed to effect was the protection given to medical men. Let the experience of the late Dr. Carpenter and his partner testify how fallacious this hope has proved. There is absolutely no protection. It is quite true that action may be stayed by application to the High Court, but what protection is this? A medical man may in all honesty sign a certificate, but there is nothing to prevent a scheming attorney from setting the law in motion against him. The very fact of doing so entails considerable expense; counsel must be employed to make the application to the court and other legal expenses incurred even if the application is successful. If, however, it should happen that the judge chooses to think that there is "reasonable ground for alleging want of good faith or reasonable care," we may find ourselves involved in costly proceedings, which mean not only loss of money—and to most doctors this means ruin—but loss of valuable

time also. The protection afforded by the Act is a figment, and what wonder is there that men decline to have anything to do with such affairs.

I am, Sirs, yours faithfully,

Aug. 14th, 1892. A GENERAL PRACTITIONER.

THE CHOLERA IN PARIS.

(FROM OUR SPECIAL CORRESPONDENT.)

IN my previous letters I described the conflict between the rival authorities, the Prefecture of the Seine and the Prefecture of Police. In spite, however, of the confusion this occasions the disinfection of private dwellings is carried out in a scientific and careful manner by these authorities. The same cannot be said of the districts that lie outside their jurisdiction. These are the suburbs beyond the fortifications of Paris, where most of the cases of cholera have occurred. Here the authorities, the mayors and municipalities of the various communes, have been called upon to rigorously disinfect all places where cases of cholera have arisen. In most instances the greatest willingness to carry out this duty has been displayed, but, at the same time, complete ignorance has prevailed as to what ought to be done. At Aubervilliers, where the epidemic has caused so many deaths, the disinfection as at first practised was not only inefficacious, but likely to increase the danger. For the use of this commune there is provided a portable disinfecting stove which is brought to the door of the contaminated house. The bed is taken downstairs and disinfected by steam under pressure. No exception can be taken to this, as it is the most efficacious process known. But precautions should be observed in bringing the infected linen downstairs. I know a case, however, where the bedding was carried down by men deputed for this purpose who had no knowledge whatever of the principles of disinfection. They came to do the work in their ordinary everyday clothes. They freely handled the soiled bedding. After it had been disinfected by exposure to steam under pressure they brought the bedding back to the room. They then proceeded to disinfect the room after having reinfected the bedding by throwing it down on the dirty floor. To disinfect the room they burnt sulphur, but they did not notice that one of the window-panes was broken and that the door fitted so badly that fingers could be passed between the door and the floor. Thus there was a through draught all the time the sulphur was burning. When the operation was over it was possible to enter the room without taking any precautions. The sulphur fumes were not sufficiently strong to cause any inconvenience — they had escaped by the broken window and by numerous apertures. The disinfectors, having concluded their task, without changing clothes or taking any other precautions, went to the nearest wine-shop to refresh themselves. In other cases, when sulphuric acid is not employed, but the room is disinfected by a mercurial solution, complaints have been made that, in the houses of the poor the work is done in a very perfunctory and inefficacious manner. A sort of portable pump should be employed, by which a fine spray of mercurial solution is thrown with considerable and penetrating force on all the furniture, walls, floor, ceiling, corners &c. But instead of doing this the disinfectors have contented themselves with merely wiping over the surfaces with a wet rag. I do not say or wish to infer that such neglect or incompetence is in any wise general. It has existed, nevertheless, much to the surprise and alarm of the newly nominated members of the Permanent Committee of Hygiene, constituted by the Prefect of Police, who inquired on the spot how these things were managed. Of course efforts were at once made to instruct the local authorities and the disinfectors in their employ. The epidemic has now lasted so long that doubtless by this time these lessons have been satisfactorily learnt.

The rag-pickers' quarter at Clichy is, I have already mentioned, about to be pulled down, and from a sanitary point of view this is a most necessary measure. But there are several such quarters in Paris. There is la cité Germain, la cité Dorée, la cité Maupy, la cité Jeanne d'Arc, le Petit-Mazas, le passage Trouillet ou du Soleil, l'île des Singes and la cité Foucault ou la cité de la Femme-en-culotte. The latter place means, if translated literally into English, the "City of the Woman with the Breeches on." The history of the place is most curious. Mademoiselle Foucault was the cousin of a marshal of France and the daughter of a large manufacturer; but in 1830 her family were ruined. At first, with the assistance of Alexandre Dumas the elder, she obtained some pupils. Finally, however, she had to seek other and manual work, and became a compositor, earning 2 fr. 50 c. per day. But she found that in the next shop men did identically the same work and received 4 fr. a day. Thereupon she dressed herself in trousers, coat and cap, and, a cigarette in her mouth, applied for work in the men's shop. The foreman pretended not to recognise her, and forthwith she earned 4 fr. a day. On this she saved money; and having discovered that huts for rag-pickers did not cost much to build, but brought in good rents, built the rag-pickers' quarter in Clichy, now known as la cité Foucault, or la cité de la Femme-en-culotte. When Mdlle. Foucault died, she left this property to the municipality of Clichy, which had been the witness of her misery and of her fortune. The structures, such as they stand, are now estimated at only £600, yet they bring in rents to the amount of £480 per annum. They are principally inhabited by rag-pickers, but they also house some street musicians, men who dance on eggs, swallow swords, castrate dogs and cats, and follow other bohemian occupations of this description.

It is a rectangular place, or narrow street, with a long house two stories high on each side, and containing about thirty single-room tenements on each floor. Each room has a door, which serves the double purpose of door and window, and each room is a little larger than an ordinary prison cell. The furniture very often consists of old rags, and a broken chair and table, but there is almost invariably a stove. Very often straw, picked up in the street when there are removals of furniture, constitutes the bedding. On this straw the rag-picker, his wife, his children and his dog, all sleep together. They are content, for they only pay 1*s.* 3*d.* to 2*s.* a week for this lodging, and are free to be as dirty as they please. The rag-picker sleeps when he returns from work—that is, at the dawn of day. By that time he has walked a very long distance; he is thoroughly exhausted, so he poises his great basket, full of the rubbish he has picked up, against the wall and, without attempting to take off his clothes, drops on the straw to sleep. When he has rested he empties his basket on the floor of his room, and sorts the rags from the paper, subdivides the rags in four piles—those of wool, cotton, linen, and silk. Each of these piles are divided into the clean rags and the dirty rags. The same has to be done for the paper—the clean from the dirty, the white from the coloured paper. Then the bones are separated from the glass; the tin, the old shoes, the bits of iron &c. all form different heaps. Out of all this he also selects remnants of food—the head of a chicken, leaves of cabbage, crusts of bread, bones that have still some meat adhering. All this he scrapes with a knife and washes carefully, and then it all goes to make the national "pot-au-feu," or soup, which is the Frenchman's delight.

There are a great number of rag-pickers who are known and kindly treated by domestic servants. They then receive direct from these domestics what would otherwise have been thrown out into the streets, and sometimes more than this is given to them. Thus they return to their quarters with a very strange mixture of leavings from rich men's tables. On this they make good meals. One rag-picker once remarked that the only difference between his class and rich people was that they had their food mixed before eating it, whereas the rich mixed their food after eating it. Needless to remark that men and women living in such a manner are very likely to contract and to convey disease.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Tyne Port Sanitary Authority,

AT a late meeting of the Tyne Port Sanitary Authority the matter of the medical officer's salary came up for discussion. Dr. Armstrong asked for an augmentation owing to the great increase in his work. At present he has only £80, with an allowance of £20 for an assistant at South Shields. The chairman, in reference to the increase in Dr. Armstrong's

work, mentioned the magnificent improvements which had taken place of late years in the sanitary arrangements of vessels, the water-supply, and the state of the forecastles &c., which, he thought, justified an increase in Dr. Armstrong's salary. Liverpool paid £100 to its medical officer, and there were only half the visits paid to vessels in the Mersey that were paid in the Tyne. It was explained that although the vessels entering the Mersey were larger those entering the Tyne were twice as numerous. The salary question was deferred to a future meeting.

Ingham Infirmary, South Shields.

The annual meeting of the governors of the Ingham Infirmary, South Shields, has been held and the report showed that the total number of patients who received treatment was 6,156, while the total income was about £1,800 and the expenditure about £100 less. The decrease in income was not considered serious, taking into account the great disputes between capital and labour during the past year leading to depression in the trade of the district. The working men's subscriptions showed a decrease of nearly £100.

The Newcastle Town Moor management have decided to plant a belt of trees thirty feet wide which will practically surround this fine expanse of open ground, proving at once useful and ornamental, for the truth must be told that for most of the year the moor is rather bleak owing to its northern exposure. It is to be hoped that the plantations will give the necessary shelter. It is estimated to cost from £7000 to £8000.

Scarborough.

Scarborough has just made the appointment of a medical officer of health, and out of forty-one applicants the post fell to Mr. G. H. Monk of Shrewsbury, who will have to devote his whole time to the duties of the office which include those of surgeon to the police, borough analyst, meteorologist and medical attendant to the fever hospital. The salary is only £325 per annum for all this. "The Queen of Yorkshire watering-places" might well have been a little more liberal in this matter.

Serious Accident to Dr. Cook of Gateshead.

It was reported here last week that Dr. Cook of Gateshead had met with a serious accident while touring in Norway. A passenger who arrived in Newcastle on Friday last has supplied the following particulars. Dr. Cook with two friends who had been on the Hardanger Fjord had been driving in one of the cars of the country from Lattefos to Odde on the return journey. All went well until they came near the latter village, when the horse shied at the sight of the white umbrella of an artist sketching on the road; the conveyance, swerving against one of the boulders which mark the course of the road, was overturned and fell upon the passengers, who were held fast beneath the vehicle. One of Dr. Cook's fellow-passengers was considerably bruised about the face, but escaped with this and a severe shock; but it was unfortunately otherwise with Dr. Cook, upon whom the greater force of the upset seemed to fall. It was found he had three ribs fractured, one of them in two places, and he was otherwise considerably bruised and shaken by the collision. As soon as possible Dr. Cook was carefully removed to Bergen; he has been placed in a private hospital, where he is receiving every surgical care and is reported to be doing as well as could be expected. This last news has given satisfaction to his numerous professional friends here. Dr. Cook is, I believe, one of the oldest medical officers in the Volunteer service.

Cumberland.

The Keswick Cottage Hospital, built for the Monk-Hall estate, adjoining the beautiful Fitz-park (so well known to visitors to the lake district), by Mr. Henry Hewitson, is to be opened on Friday next by Lady Jane Spedding of Mirehouse.

A Cumberland Lady's Charitable Bequests.

The will of Mrs. Jane Dover of Skiddaw Bank near Keswick has lately been proved. Amongst various bequests she leaves £3000 Two-and-three-quarter per cent. Consols to the Royal Society for the Prevention of Cruelty to Animals, £1000 to the Liverpool Branch of the said society; also £500 each to the Scottish Society for the Prevention of Cruelty to Animals, the Liverpool Temporary Home for Lost and Starving Dogs, the Royal Albert Asylum for Idiots and Imbeciles at Lancaster, all free of legacy duty. The residue of her estate she directs to be divided in equal shares amongst various religious societies and the institutions above mentioned, so that the dogs are well provided for by this kind lady. The net value of her estate in England was proved at over £12,000.

The committee of the Darlington Cyclists' Parade have announced that they will distribute the net proceeds, amounting to about £56, amongst the Darlington Hospital and other local charities.

Newcastle-upon-Tyne, Aug. 17th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Epidemic of Scarlet Fever in Glasgow.

THE supplementary hospital for epidemic diseases in Parliamentary-road had to be opened recently on account of a smart outbreak of scarlet fever in one of the southern divisions of the city, which had been traced quite clearly to a particular dairy and a particular farm. This epidemic was of a novel kind, at least in Scotland, inasmuch as it arose not in connexion with preceding human disease in the dairy in question or in the farm, but apparently from disease of some kind on the teats of the cows, not easily distinguishable from cow-pox. The Health Committee of the Town Council, aided by the Renfrewshire authorities are making a rigid inquiry into all the circumstances; they intend also to ask the assistance of the Local Government Board of England, as they are understood to be familiar with inquiries of this particular kind. Meantime it is satisfactory to note that the epidemic, except for possible secondary cases, is at an end, the dairyman and the owner of the farm concerned having given every assistance to the sanitary authorities in checking its spread.

Edinburgh University.

The University authorities have received intimation of the approval by the Queen in Council of Ordinance No. 16 of the Universities Commission (Edinburgh No. 1—Regulations for Degrees in Medicine). The provisions of the Ordinance will come into operation at the beginning of the ensuing winter session.

Medical Education of Women in Glasgow.

The experiment made by the directors of the Royal Infirmary in opening certain of their wards for the clinical teaching of women has turned out a failure, and the governing authorities of the infirmary and also those of St. Mungo's College have now determined to exclude females both from the wards and from the college classes. It is about two years since the students of Queen Margaret College were granted facilities for obtaining clinical and pathological instruction in the infirmary, and at the same time the ladies attending medical classes in St. Mungo's College and other lady "medicals" were afforded the same opportunities, the Queen Margaret students, however, having their instruction separately, while the others attended mixed classes both in college and in the wards. The arrangement, however, has come to grief over the dispensary question, it having been found inconvenient, if not impossible, to carry on the very essential dispensary work of the curriculum either in mixed classes or separately, the objection to mixed dispensary classes having come, not from the women, but from the male students. To get over this deadlock the managers have decided to exclude ladies at once from St. Mungo's College and from the wards, the only exception made being in favour of Queen Margaret students, who will be permitted to attend pathological and clinical classes till the end of the summer session of 1893. All this comes as something of a shock to the friends of medical education for women in Glasgow, as unless some new arrangement is speedily made such teaching must come to and end in this city. Queen Margaret College in particular will be in a difficulty and will specially feel the hardship; it has been prospering to the satisfaction of its friends, and has only recently been affiliated to Glasgow University, which has taken over its buildings and endowments and with them all duties and responsibilities. Amongst other things it must provide clinical facilities for its lady medical students, and at first sight it is not easy to say where these are to be found. The Royal Infirmary is shut to ladies and the Western Infirmary, already much overcrowded with male students, refused some time ago to make room for ladies, and

it is not likely that recent events will make it more ready to admit them. Two ways out of the difficulty offer themselves. The enormous amount of clinical material, hitherto practically unused, to be found in the Town's Hospital, the large pauper hospital of Glasgow, might be made available. But a much better field for study would be found in the Victoria Infirmary, opened about two years and a half ago, and situated in one of the prettiest parts of the environs of Glasgow. The Victoria Infirmary is fully equipped as an institution suitable for medical education, having an ample number of beds and a newly inaugurated out-door department in which all forms of practical training could be carried on. Further, so far, it is not connected with any medical school, and this opens a field for clinical instruction free and uncomplicated by the presence of male students. If the governors of the Victoria Infirmary are willing to admit them, lady students will have in their wards opportunities for clinical study unrivalled in Scotland. One obstacle suggests itself, the great distance which intervenes between Queen Margaret College and the Victoria Infirmary, the former being in the extreme west of Glasgow, the latter in the extreme south. This obstacle would really be a fatal one were it not that there lies at hand a ready means of obviating it. A few years ago Dr. Muirhead of Cambuslang left a sum of about £40,000 (no mean legacy) for the erection and endowment of a medical school for women on the south side of Glasgow and near the Victoria Infirmary. So far this sum has not been applied to the purpose for which it was left by its donor. Queen Margaret College, however, notwithstanding the very specific direction given by Dr. Muirhead as to the exact locality of the new school, has made persistent efforts to obtain possession of it. And to some extent its action is justified, as it would be nothing short of a misfortune were two medical schools for women to be opened in Glasgow. An attempt at competition would probably lead to the failure of both. But the way of escape from difficulty is easy. Queen Margaret College, with its affiliation now completed and its £15,000 of endowment, should join hands wtih the Muirhead trustees, and send their entire medical faculty to the south side of the river, keeping their arts and literature classes in their western buildings as at present. With their conjoined funds they could build and endow a suitable school near the Victoria Infirmary, where the theoretical and practical portions of medical training could easily and satisfactorily be undertaken. If this were done, and suitable terms made with the governors of the Victoria Infirmary, Glasgow would possess a medical school for women second to none in this country. The university authorities would be well advised if they considered carefully such a plan as that sketched here, otherwise they will have some difficulty in providing the indispensable hospital facilities for their newly acquired members, the lady medical students.

Aug. 17th.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

City of Dublin Hospital.

THIS institution having proved inadequate to accommodate the numerous applicants, the board have determined to erect a structure which will about double the present accommodation. An excellent design has been selected and estimates made showing that a hospital according to the plans adopted may be constructed at a cost of from £9000 to £10,000. Lord Pembroke has promised £6000, and the subscriptions up to June last were close on £2000, so that the board look forward with confidence to the amount still required being obtained at no distant date.

The late Samuel Chaplin, J.P., F.R.C.S.I., of Kildare.

It is proposed to erect a memorial window in Kildare Cathedral to the memory of the late Mr. Chaplin as a mark of esteem, he having been mainly instrumental in raising a sum of £7000 for the restoration of the cathedral. The cost of the memorial window will be £250, towards which about £150 has already been subscribed.

Death of Mr. Denis D. Redmond, F.R.C.S.I.

Mr. Redmond died last week after a short illness. He was ophthalmic and aural surgeon to St. Vincent's Hospital, assistant surgeon to the National Eye Infirmary, an examiner in the Royal University and a member of the Royal Dublin Society.

National Hospital for Consumption for Ireland.

The total collected up to date to erect an institution for the treatment of phthisical patients is £10,231 19*s.* 1*d.* As, however, it is contemplated to have a hospital capable of accommodating 100 patients almost as much again may reasonably be expected to be required. Among those who have contributed liberally may be named Lord Iveagh, who has given £1000; Mr. T. P. Cairnes, £1000; Earl Fitzwilliam and Mr. Mitchell Henry of Galway, £500 each, while a considerable number of gentlemen have given £100 each. It is gratifying to state that at last a suitable site has been settled on for erecting the hospital—a place which no one can cavil at and which has been unanimously approved of by the medical men on the committee of management. The situation of the new hospital is in the county Wicklow, between Newcastle and Newtown Mount Kennedy, on a dry soil, well sheltered from adverse winds. Earl Fitzwilliam, who is the principal owner of property in this county—the most beautiful in Ireland—has very generously presented a site of nearly twenty acres, and this selection of a site will undoubtedly have a large influence on the donations, as a large number have abstained from contributing until the locality for the proposed hospital had been agreed upon. I see no reason to doubt that before the year closes a sum of £20,000 will be obtained for an institution with so many claims for support on the charitable.

Sir Francis Xavier MacCabe.

On Saturday His Excellency conferred the honour of knighthood on Mr. MacCabe, Medical Commissioner Local Government Board. Sir Francis MacCabe's services in various departments — in Irish Prisons and Reformatory Schools, as Inspector and afterwards Medical Commissioner Local Government Board—have been of immense value to the community. He is a thoroughly competent official, and the distinction conferred upon him has been well earned by good and faithful service.

British Institute of Public Health.

The first meeting of the Hygienic Congress will take place to-morrow (Wednesday) at the College of Surgeons, when the President, Sir Charles Cameron, will deliver an address, and afterwards a discussion will take place on the causation of typhoid fever. On the following day the subject of Compulsory Notification of Infectious Diseases will be discussed, and Sir C. Cameron will exhibit carbonic acid snow and point out its antiseptic properties.

Death from Arsenical Poisoning.

A lady died at Ballintemple, county Cork, last week from a poisonous dose of arsenic. The deceased had made more than one previous attempt on her life. She appeared to suffer no pain, and was unconscious for two days before death; but the strange absence of certain definite symptoms in some cases of poisoning by arsenic are not altogether uncommon, and exceptions and anomalies of the most perplexing kind are occasionally manifested.

Cork City Hospitals.

The generous donation—£1000—of Sir J. Arnott has been distributed among the following hospitals—viz., South Infirmary, £250; North Infirmary, £200; Fever Hospital, £150; Mercy Hospital and Women and Children's Hospital, £100 each; Blind Asylum, £75; Lying-in Hospital, £50, and some other institutions £25 each.—At the monthly meeting of the governors of the South Infirmary last week Dr. A. W. Sandford was appointed ophthalmic surgeon to the hospital, and a vote of thanks was accorded to Mr. Corbett, surgeon dentist, who had resigned, for services for many years to the hospital.

Mr. Hengler, the well-known circus proprietor, has promised to distribute the receipts of one evening performance this week among the City medical charities.

Mr. Albert Croly, F.R.C.S.I., of Greenfield, Rathfarnham, county Dublin, has been placed on the commission of the peace for the county Dublin.

On the 25th inst. the governors of the Richmond Hospital will elect an assistant-surgeon to hold office for three years. There is no salary attached to the post.

August 16th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Laborde's New Method of producing Artificial Respiration.

To the methods of resuscitation in suspended animation associated with the names of Marshall Hall, Silvester and Howard there must now be added yet another invented by Dr. Laborde, who presides over the physiological laboratory of the Paris faculty. The value of the new method is enhanced by its extreme simplicity and facility of application. It consists in drawing the tongue well out of the previously opened mouth and then imparting to that organ energetic and rhythmic backward and forward movements. This manœuvre has the effect of stimulating the respiratory reflex through the traction on the tongue and the excitation of its basal portion. The idea of applying this method to the human being was suggested to Dr. Laborde by its success in the laboratory. In cases of suspended animation in animals under experiment—whether due to syncope, accidental asphyxia, or to chloroform or chloral—Dr. Laborde has long been in the habit of supplementing electrisation (the passage of interrupted currents from the mouth to the anus) and ordinary artificial respiration with this method of rhythmic tongue-traction, which of itself was often sufficient to determine respiratory movements after a series of loud hiccoughs, which at first passive—*i.e.*, provoked by the manœuvre only—soon became spontaneous. Dr. Laborde cites (*Académie de Médecine*, July 5th) the case of two individuals whose lives he saved by his method. The *modus operandi* is very simple. A spoon, the handle of a knife, or any such instrument is utilised for the double purpose of keeping the jaws apart and pressing on the base of the tongue. The tongue is then seized between the finger and thumb—which, to avoid slipping, are enveloped in a handkerchief—and pulled forcibly forwards out of the mouth. The organ is then subjected to the rhythmic to-and-fro movements, eighteen to the minute, until success crowns the operator's efforts. Whilst advising recourse to the methods usually employed, Dr. Laborde believes that his own proceeding is the most effectual, and that it will often succeed even when all hope is apparently fled.

Dr. Brouardel on "Submersion."

In connexion with the above readers of THE LANCET will be interested by some remarks of Dr. Brouardel:—"In deaths from submersion three mechanisms may come into play. The fatal result may ensue suddenly, at the very instant of the plunge. Here instantaneous inhibition of the respiratory, and perhaps also of the cardiac, centres occurs, probably through reflex action exerted by the cold, the principal afferent nerves being the superior laryngeal. In such a case the individual expires without a drop of water having entered the trachea. In another class of cases death may not be due to reflex inhibition at all. The submerged one may be unable to rise to the surface, being entangled at the bottom of the river by boulders or weeds. Experiments on animals show that here nothing penetrates into the respiratory tree during the first minute, the glottidean sphincter being in a state of spasm. But this spasmodic state is soon succeeded by relaxation and water then enters freely. A dog weighing five kilogrammes has been known to absorb thus in one minute no less than 400 grammes of liquid. In both the foregoing classes of cases artificial respiration either by the Silvester or the Laborde methods, together with, in the latter instance, evacuation of the water aspired into the lungs, may suffice to save the individual. Unfortunately, the third and much more frequent mechanism by which fatal drowning may occur is much more dangerous in its effects, and the means at our disposal are too often inadequate to avert the consequences. Here, the drowning man, before he is finally engulphed, struggles and reappears once or twice at the surface. His efforts at respiration introduce into his lungs not only water largely mixed with air, but also the contents of the stomach expelled from that organ by the violent contractions of the diaphragm. In addition there enters into the circulatory system a quantity of water equal to the fourth or even the third of the volume of blood, a fact easily proved by examination of the blood with the hæmocytometer. Then, again, the presence of water in the ultimate alveoli causes the prompt exfoliation of the pavement epithelium with which they are lined, a circumstance which damages their respiratory functions. We have thus three conditions which render the chances of recovery problematical—viz., the obliteration of the bronchial tree by water, the hydræmia, and the spoilt state of the alveoli."

A Venerable Student.

Fifty-nine years is a long time to wait before emerging out of the pupil stage and beginning the practice of medicine. Such a feat has, however, just been accomplished by M. Vouillemin, mayor of his native town, Bourmont, member of the board of health of his department, the Haute-Marne, and pharmacien de première classe. Fired with the praiseworthy ambition of rising in the professional and perhaps social scale, the worthy mayor applied himself to the assiduous study of his new art at the Nancy Faculty, where he went through the examination mill like his beardless comrades, and the other day crowned his work by triumphantly passing his thesis for the doctorate. The final ordeal over Monsieur le Maire was presented by the youngest of the first year's men with a bouquet, on the ribbon ornamenting which was borne the following device:—"Au doyen des étudiants ses camarades de la Faculté de Nancy."

Paris, Aug. 17th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Action of Nuclein.

To the number of the lymphagoga—now better known on account of the experiments of Heidenhain, Roemer and Goertner—a new substance has been added by the recent researches of Professor Horbaszewski of Prague. In the course of his researches on the origin of uric acid in the mammals he made the interesting discovery that leucocytosis was increased in the animals by the injection of nuclein. Further experiments proved that nuclein could be administered in man in doses of from five to ten grammes without producing any evil effects. It has now been proved by recent experiments that inflammatory processes going on in the organism are considerably augmented by the injection of nuclein. In cases of lupus, local and general reaction (rising of temperature up to 39·90 C.) was produced by the internal administration of a half to three grammes of nuclein per diem. The symptoms of reaction remained as long as the nuclein was used and disappeared when the administration of the nuclein was withdrawn. It must be remarked that the same reaction could be obtained again by using the same dose of nuclein as before, while it is necessary to increase the dose of tuberculin, as is well known, in the course of treatment. It was also found that torpid varicose ulcers of the leg healed quickly under the internal use of one to two grammes of nuclein per diem. In cases of carcinoma and of large abscesses the administration of nuclein did not produce any effect, while in syphilitic ulcers granulation could be observed to occur. The effect of nuclein has been most marked in cases of skin affections, but the general reaction only occurred in cases of lupus, perhaps on account of the resorption of the tuberculous matter which is present in the lupous growths. The nuclein used by Professor Horbaszewski was prepared from the pulp of the spleen of calves which had been subjected to digestion by pepsin and hydrochloric acid and subsequent depuration.

Surgery of the Brain in Epilepsy.

According to a communication received recently, in the case of one of the two epileptic patients who were operated on by Professor Benedict this year the epileptic fits returned again after cessation for a few months. The microscopical examination of the extirpated parts of the cortex did not reveal any pathological condition. It seems that this surgical method of treatment of epilepsy requires prolonged observation of the patients after the operation before its value can be sufficiently estimated.

Cholera and Infectious Diseases.

Up till now no cases of cholera have occurred in Austria-Hungary, and the rates of prevalence and mortality of the other infectious diseases are not higher than in previous years at the same season. Sanitary examinations are now

carefully made throughout the whole empire and sometimes reveal gross nuisances which would otherwise have escaped public attention.

Vienna, Aug. 15th.

Obituary.

DENIS D. REDMOND, F.R.C.S.I.

A WELL-KNOWN Dublin practitioner died on the 11th inst., after a short illness. He pursued his medical studies at the schools of Dublin, London, Paris and Vienna, and then commenced practice in his native city. He quickly made his way, and at the time of his death enjoyed an unusually large measure of success as an ophthalmic and aural surgeon. Mr. Redmond possessed a most complete knowledge of physical science which helped him in no inconsiderable degree to reach the high position he undoubtedly held. He occupied many public positions, being ophthalmic and aural surgeon to St. Vincent Hospital, examiner at the Royal University, lecturer on ophthalmology at the Catholic University, assistant surgeon to the National Eye and Ear Infirmary and member of the Council of the Ophthalmic Society, &c.

MEDICAL TRIAL.

MEDICAL MEN AND THE NEW PUBLIC HEALTH ACT.

DR. RAYNER D. BATTEN of Notting-hill-square, Campden Hill, appeared at the West London Police-court on Friday to answer a summons for having on July 29th attended, at the Queen's Jubilee Hospital, Earl's Court, a patient named John Weston, aged fifteen years, of 30, Dymock street, Fulham, who was suffering from diphtheria, without sending a notice or certificate to the medical officer of health as required by the Public Health (London) Act, 1891. The summons was issued on the application of Mr. Cooney, the medical officer of health for Fulham, and Mr. Blanco White appeared in support of it. Mr. A. O. Scott was for the defence.

Eliza Weston, of 32, Wandsworth Bridge-road, Fulham, said that on July 28th she took her son to the Jubilee Hospital. She took the child again on the 29th and saw defendant, who told her that the child was suffering from diphtheria and would have to go away. She consented to his being sent away.

Mr Cooney was called and said that he had not received any notice from the defendant that he had attended the child in question and that it was suffering from diphtheria.

Mr. Scott: From whom did you receive this notice?—Witness: I have not received any legal notice.

Who gave you the information?—The last witness and I received notice on Aug. 2nd from the Asylums Board that a child had been received suffering from diphtheria and that the child came from the Jubilee Hospital.

Mr. Blanco White: I believe that in consequence of this notice not having been received there was a delay of five days in disinfecting the premises and during that time serious consequences might have arisen.

Mr. Cooney: That is so, but not only that. I have not yet been able to send in the papers which I am obliged to do and I cannot obey several sections of this Act.

Mr. Scott, for the defence, said that Dr. Batten was one of the medical gentlemen attending the Jubilee Hospital without any reward of any kind, and in the course of his attendance there saw a large number of patients. He first saw the child in question on July 29th, and in his opinion the case was not very serious, but still it was a case of diphtheria. He told the mother that it would have to go away, and without waiting at once filled up the proper notice to be sent to the medical officer. Dr. Batten handed the notice to the secretary of the hospital and told him to do what was necessary.

Mr. Curtis Bennett: The Act of Parliament says nothing about instructing someone else to do it. The words are "he shall forthwith send."

Mr. Scott submitted that Dr. Batten had, in fact, sent within the meaning of the words of the section the notice to the medical officer. Instead of sending it himself he had handed it to the secretary of the hospital to do so.

Mr. Curtis Bennett: It is for the medical practitioner to send it himself, not to give it to someone else and ask him to send it.

Mr. Scott: Handing the notice to the secretary of the hospital is sending.

Mr. Curtis Bennett: No, it is not. To give the notice to a person who is not under compulsion to send it is no more sending it than if you gave it to someone else in the street.

Mr. Alfred J. Schneidan, the secretary of the Jubilee Hospital, was called and said the notice was handed to him by Dr. Batten with the request that he would send it on at once.

Mr. Curtis Bennett: To whom?

Mr. Schneidan: To the medical officer, I suppose. I called up the telephone to the Metropolitan Asylums Board and asked if I should send the certificate as usual and they said, "Hand it to the nurse."

Mr. Curtis Bennett: They meant that you should hand to her the certificate for the patient's admission to the hospital, not the notification to the medical officer of health.

Mr. Schneidan said that he handed it to the nurse, believing that he was acting rightly.

Mr. Scott submitted that, although the secretary to the hospital had made a mistake, the defendant had done his duty in regard to sending the notice.

Mr. Curtis Bennett: You must show me, then, that the doctors of the Jubilee Hospital are exempted from the requirements put upon all other medical practitioners.

Dr. Batten was called as a witness in his own defence and corroborated the statement made by Mr. Scott on his behalf. He said that at the time this certificate was filled up some twenty-five patients were waiting for his attention to them.

Mr Curtis Bennett said it was quite clear that the defendant, without intentionally going round the Act of Parliament, had not done what was required of him. Had it been the case that the defendant had wilfully flown in the face the full penalty of a forty-shilling fine and costs would have been imposed. No doubt the authorities at the Jubilee Hospital, now that what was required of them by the Act had been pointed out, would see that in future it was complied with. Under the circumstances only a modified penalty of a fine of 10s., with 12s. costs, would be inflicted.

Medical News.

ST. JOHN AMBULANCE ASSOCIATION.—H.R.H. Princess Beatrice, who has recently obtained the first aid certificate of the St. John Ambulance Association, has consented to become the president of a new Deeside centre, to include Balmoral, Crathie and neighbouring places.

THE SEAMEN'S HOSPITAL.—As a result of the privilege accorded by the directors of the Peninsular and Oriental Steam Navigation Company of throwing open to the public their magnificent vessel the *Himalaya* the funds of the Seamen's Hospital have benefited to the extent of £120.

A SICK HOSPITAL FOR THE LUNATIC ASYLUM, INVERNESS.—The Inverness District Board of Lunacy has resolved to erect a sick hospital in connexion with the asylum, to accommodate about 150 patients, on the plan of the hospital lately erected at Montrose. This scheme is adopted to relieve the overcrowded state of the institution.

DRAINAGE WORKS (WEYBRIDGE DISTRICT).—The Chertsey Sanitary Authority has purchased twenty-eight acres of land, at a cost of £6000, for the drainage of the Weybridge district, on a site in the valley of the river Wey. The system to be adopted will be chemical precipitation and filtration through land.

OUTBREAK OF GLANDERS AT BEDDINGTON.—The Croydon Rural Sanitary Authority has reported a serious outbreak of farcy and glanders on the Corporation Sewage Farm at Beddington, where seventy or eighty horses belonging to various owners are located for grazing purposes. The local veterinary inspector detected two serious cases of glanders, and the animals were shot and buried.

SOCIETY OF APOTHECARIES OF LONDON.—At the recent Examinations for the prizes given annually by the Society of Apothecaries the successful candidates were as follows:—*Botany:* 1st, Edward Guy Dru Drury, student of St. Bartholomew's Hospital, a Gold Medal; 2nd, Stanley Bean Atkinson, student of St. Bartholomew's Hospital, a Silver Medal and a Book. *Materia Medica* and *Pharmacy:* 1st, Richard Henry Norman, student of Westminster Hospital, a Gold Medal; 2nd, William Douglas Knocker, student of St. Thomas's Hospital, a Silver Medal.

MEDICAL MAGISTRATES.—Mr. William Wright Hardwicke, M.R.C.P. Edin. &c. and Mr. Samuel Evans, L.R.C.P. Lond., M.R.C.S., have been placed on the Commission of the Peace for the Borough of Harwich.—Mr. Charles W. Browne, M.R.C.S., L.S.A., of Bushman's Kop, Orange Free State, has been appointed a justice of the peace for the districts of Rousville and Wepener. His Excellency the Lord-Lieutenant has assigned Her Majesty's Commission of the Peace for the Borough of Dublin to Mr. G. F. Blake, Registrar of the Royal College of Surgeons in Ireland.—Mr. John Keys, L.R.C.P., of Whitehall House, Dublin, has been placed on the Commission of the Peace for the Borough of Dublin.—Mr. William Mitchell Banks, M.D. Edin., F.R.C.S. Eng., has been placed on the Commission of the Peace for the city of Liverpool.

SMALL-POX AT LEEDS.—Considerable alarm prevails at the continued extension of the outbreak of small-pox at Leeds. The number of patients is gradually increasing.

SUPERANNUATION GRANT.—Dr. G. R. Barnes, medical officer of the Ewell sanitary district of the Epsom Union, has been granted by the Epsom Board of Guardians a superannuation allowance of £35 per annum, and, pending the sanction of the central authority a further sum of £15.

THE JUBILEE NURSES' ASSOCIATION.—At a meeting of the Brechin branch of this Association on the 10th inst. a letter was read from Mr. Robert Duke of Bareshill offering a donation of £500 to the funds of the branch from his sister, Miss Duke of Eskpark, and a similar donation from himself. Mr. Duke further intimated that Miss Duke and himself intended subscribing £10 annually to the branch.

THE NORTH WALES MEDICAL ASSOCIATION.—The annual meeting of this Association was held at Barmouth on the 10th inst., and the usual elections were proceeded with. Dr. John Roberts, J.P., was chosen as president for the ensuing year, Mr. S. Griffith was re-elected treasurer, and Dr. Jones-Morris hon. secretary. After the reading of papers the members of the Society dined together.

LLOYD COTTAGE HOSPITAL.—The useful work carried out during the year at Bridlington in connexion with its cottage hospital was recounted in the report read at the annual meeting of its friends and supporters last week. In-patients to the number of 109 have benefited during the past year by the resources of the hospital, whilst 110 out-patients received medical and surgical treatment at the hands of the physicians and surgeons attached to the institution.

A NEW PARK FOR TOTTENHAM.—The grounds attached to an historic building at Tottenham, known as Bruce Castle, have recently been purchased by the Tottenham Local Board of Health, and on the 13th inst. they were formally thrown open to the public. Addresses were afterwards delivered from a temporary platform in the park by Mr. Howard, M.P., and others. Later on there was a display of fireworks.

TESTIMONIAL.—Last week the friends and patients of Dr. George Wilson of Huntly assembled at a banquet, under the presidency of the mayor, to do honour to their fellow-townsman, who for sixty years had carried on medical practice in Huntly, and who has signified his intention of retiring from the cares and anxieties of professional life. On the occasion in question an address, followed by 450 signatures, was presented to Dr. Wilson, accompanied by a silver tea service and a portrait in oil of their venerable guest.

MANCHESTER AND SALFORD LOCK HOSPITAL.—A general meeting of the trustees and friends of the Manchester and Salford Lock Hospital was held on the 11th inst. The committee, in their report, spoke of the result of two years' steady work, in which the number of cases treated had been larger than usual. In 1890 the death of Dr. Alfred Blackmore removed an honoured name from the staff, and left a vacancy which the committee filled by the appointment of Mr. Alexander Wilson, F.R.C.S.Eng. The report was adopted, together with a statement of accounts showing a balance on the right side.

LANCASHIRE ASYLUM BOARD.—A meeting of the Lancashire Asylum Board was held recently at the County Offices, Preston, and the Rev. C. T. Royds, who presided, presented the report of the Subcommittee on Additional Asylum Accommodation. There were, he said, three sites brought before the committee as combining all the requisites desirable for the proposed new asylum, either of which, he thought, would meet the approval of the Lunacy Commissioners. The first site was Duxbury Hall, near Chorley, containing 512 acres; the second was Penwortham Priory, 147½ acres; and the third was Winwick Hall, near Warrington, with an area of 130 acres. It was resolved that the committee ascertain and report the best terms on which the Duxbury Hall site could be obtained; and a similar resolution was adopted with regard to the Winwick estate. It was agreed that £700 be granted from the asylum fund for additional accommodation at Prestwich Asylum; and £5500 for a similar purpose at Rainhill Asylum.

IT is officially announced that the Queen has nominated Professor Sir George H. B. Macleod, M.D., Surgeon in Ordinary to the Queen in Scotland, to be, for five years from the 15th of September, 1892, a member of the General Council of Medical Education and Registration of the United Kingdom for Scotland.

PRESENTATION.—Dr. M. T. Mackenzie of Scolpaig House, North Uist Inverness, where he has been the parochial medical officer for the past seven years, was last week the recipient from the inhabitants of the island of a testimonial consisting of a handsome Stanhope gig and a set of silver-mounted harness.

RETREAT FOR INEBRIATES.—The twelfth report of the Inspector of Retreats under the Inebriates Acts 1879 and 1888 for 1891 deals with seven retreats licensed by local authorities during the past year. The licences of all the establishments existing in the foregoing twelve months were received with one exception, and a licence was granted to a new retreat for female patients at Westgate. The general condition of the establishments was described as satisfactory. In 1890 the number of the inmates was 109, and last year there had been an increase over that figure of six.

POLLUTION OF THE AIRE.—On the 10th inst. representatives of the various local authorities of Yorkshire met at Keighley, by invitation of the mayor, to confer on the best means of effecting an improvement in the river Aire, which had been gradually exhibiting signs of increasing pollution. The testimony of several of the speakers pointed clearly to trade refuse as the chief source of that pollution, and in the end a motion was agreed to that the Sanitary Committee of the West Riding County Council be asked to employ a chemical expert who should advise local authorities as to the best way of treating trade effluents.

DEATH DURING THE ADMINISTRATION OF CHLOROFORM.—An inquest was held at the Town Hall of Portsmouth on the 15th inst. respecting the death of a girl aged thirteen years who died whilst being prepared for an operation for the removal of a nævus on the back. Three medical practitioners attended at the parents' house for the purpose of proceeding with the operation, but, according to the report of the evidence given at the inquest, during the process of administering the anæsthetic the respiration of the patient became embarrassed and the pulse failed. Sustained efforts to restore animation were found to be ineffectual. The jury returned a verdict of accidental death.

NEW INFIRMARY, SOUTHPORT.—Very satisfactory progress has been made towards the proposed scheme for erecting a new infirmary at Southport. The necessary plans for the building have been adopted, and although the committee at first decided to limit the cost of it (exclusive of furnishing) to £12,000, the expenditure will considerably exceed that sum. The beneficiaries of the Scarisbrick Estate have given the site on Scarisbrick New-road, and the promises of donations and subscriptions now amount to £15,400. The mayor (Alderman G. A. Pilkington, M.R.C.S.), the chief originator of the scheme gave at once £1000 and asked for nine other contributions of a similar sum. So far eight have been forthcoming towards the building and endowment funds respectively.

MEDICAL NOTES IN PARLIAMENT.

THE short session of Parliament was brought to a close this week. The House of Lords met on Monday, when Lord Salisbury formally intimated that he had resigned office. Both Houses met on Thursday. In the Lower Chamber writs were issued for the election of members to the seats vacated by Mr. Gladstone, Sir William Harcourt, Mr. John Morley, and others on their acceptance of office under the Crown. Some formal business was transacted in the House of Lords. Late in the evening of the same day Parliament was prorogued.

Drinking at Elections.

Mr. Caine has given notice that in the course of next session he will introduce a Bill to close public-houses and beer-houses on the day of polling in Parliamentary elections.

The Visitors in Lunacy.

There has been presented to Parliament a report of the number of visits made, of patients seen, and of miles travelled by the Visitors in Lunacy between January 1st and June 30th of the present year. These visits are made in pursuance of the provisions of the Lunacy Act of 1890.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BRADSHAW, ROBT., L.A.H., L.M. Dub., has been appointed Medical Officer for the Ninth Sanitary District of the Hexham Union.

BRIGGS, W. P., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Aspatria Sanitary District of the Wigton Union.

BURBIDGE, J. W., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Upper Sanitary District of the Lewes Union.

COLEMAN, M. O., M.D. Aberd., M.R.C.S., has been reappointed Medical Officer of Health for the Surbiton Urban Sanitary District of the Kingston Union.

CONNON, C. J., M.B., C.M. Aberd., has been appointed Medical Officer for the Third Sanitary District of the Hexham Union.

DOVE, EMILY L., M.B. Lond., has been appointed Resident Clinical Assistant to the Holloway Sanatorium Hospital for the Insane, Virginia Water.

EWART, C. THEODORE, M.D., M.Ch., has been appointed Senior Assistant Medical Officer for the Female Department of the London County Asylum, Colney Hatch, vice W. H. George, deceased.

FAWSSETT, F., M.B. Lond., B.S., L.R.C.P., M.R.C.S., has been appointed Medical Officer for the outlying part of the St. John's Parish of the Lewes Union.

GIBSON, E. VALENTINE, M.D. Edin., has been appointed Superintendent and Resident Medical Officer to the Victoria Infirmary, Glasgow, vice Dr. Mackintosh, resigned.

GOW, WILLIAM J., M.D. Lond., M.R.C.P., has been appointed Obstetric Physician to the Royal Hospital for Women and Children, Waterloo-bridge-road, vice W. Duncan, M.D., resigned.

HARMAN, ALBERT B., M.R.C.S., L.S.A., has been appointed Assistant House Surgeon to the Royal South Hants Infirmary, Southampton.

HAWLEY, F. H., M.R.C.S., has been appointed Medical Officer for the Blankney Sanitary District of the Sleaford Union.

JAMES, JOHN, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Rural Sanitary District of the Aberystwith Union, vice Turner, resigned.

LAING, G. MACKEY, L.R.C.S. Irel., L.R.C.P., L.M., has been appointed Medical Officer and Medical Officer of Health to Ballina Dispensary District, and Medical Attendant R.I.C.

LEYS, JOHN, M.B., C.M. Aberd., has been appointed Medical Officer for the Norton Sanitary District of the Leek Union.

NEWBOLT, GEO. PALMERSTON, M.B. Durh., F.R.C.S. Eng., has been appointed Honorary Surgeon to the Liverpool Stanley Hospital.

PEARSE, F. E., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Horsley Sanitary District of the Guildford Union.

PRICE, W. E., M.B. Durh., M.R.C.S., has been appointed Medical Officer for the Sollershope Sanitary District of the Ross Union.

SANDFORD, H. V., L.R.C.P. Lond., L.F.P.S. Glasg., has been reappointed Medical Officer of Health for the Rural Sanitary Districts of Bromyard, Hereford, Ledbury, Leominster, and Weobley Unions.

THOMPSON, P. W., M.B. Toronto, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Assistant Medical Officer at the Infirmary of the Woolwich Union.

THORNE THORNE, BERTHOLD B., M.R.C.S., L.R.C.P., has been appointed Assistant House Surgeon to the Royal Portsmouth Hospital.

WILLS, CHAS., M.R.C.S., has been reappointed Medical Officer of Health for the Southwell and Worksop Rural Sanitary Districts.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BOROUGH OF SUNDERLAND (PORT OF SUNDERLAND).—Medical Officer of Health and Public Analyst. Salary £500 as Medical Officer for the Borough, £20 for the like office for the Port, and £5 as Public Analyst. (Apply to the Town Clerk; Town Hall, Sunderland.)

CENTRAL LONDON OPHTHALMIC HOSPITAL, 238A, Gray's-inn-road, W.C. House Surgeon. Rooms, coals, and lights provided.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Board and residence and allowance for washing provided. (Apply to the Secretary, Office, 24, Finsbury-circus, E.C.)

DOCTOR, 2, New Rents, Ashford, Kent.—Qualified Medical Assistant for a Medical Association.

GENERAL HOSPITAL, BIRMINGHAM.—Assistant House Surgeon for six months. Residence, board and washing provided.

HOUSE SURGEON, THE LANCET Office, 423, Strand, W.C.—House Surgeon for a small County Hospital near London. Salary £50 a year.

KENT AND CANTERBURY HOSPITAL.—House Surgeon. Salary £90 the first year, with board &c., rising to £100 the second year.

KENT COUNTY LUNATIC ASYLUM, Barming Heath, near Maidstone.—Senior Assistant Medical Officer. Salary £250 per annum, increasing by two annual instalments of £25 each up to £300, with furnished quarters, attendance, coal, gas, washing, garden produce and milk.

KENT COUNTY LUNATIC ASYLUM, Barming Heath, near Maidstone.—Second Assistant Medical Officer. Salary £180 per annum, with furnished quarters, attendance, coal, gas, washing, garden produce and milk.

LEITH HOSPITAL.—House Physician for six months. Salary at the rate of £50 a year, with board in the hospital.

LEITH HOSPITAL.—House Surgeon for six months. Salary at the rate of £50 a year, with board in the hospital.

LEITH HOSPITAL.—Surgeon for the Out-door Department for six months. Salary at the rate of £50 a year, with board in the hospital.

LONDON FEVER HOSPITAL, Liverpool-road, N.—Assistant Resident Medical Officer.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—House Surgeon for six months. Salary at the rate of fifty guineas per annum, with residence in the hospital, board and washing.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT.—Honorary Assistant Medical Officer.

M. W., at Shelley's Advertising Offices, 38, Gracechurch-street, E.C.—A qualified Medical Man for the Employés of the Gio Appanto Gold Mining Company, on the West Coast of Africa. Salary £240, all found.

NOTTINGHAM BOROUGH ASYLUM.—Second Assistant Medical Officer. Salary £100 per annum, with apartments, board and washing.

ROYAL HOSPITAL FOR SICK CHILDREN, Glasgow.—Assistant House Surgeon. Salary £30, with board and lodging.

ROYAL SURREY COUNTY HOSPITAL, Guildford.—Resident House Surgeon. Salary £80 per annum, with board, lodging and washing.

ST. MARY'S HOSPITAL, Paddington, W.—Physician-Accoucheur in charge of out-patients, for five years.

SUFFOLK GENERAL HOSPITAL, Bury St. Edmunds.—House Surgeon. Salary £100, with board, lodging and washing.

SUSSEX COUNTY HOSPITAL, Brighton.—House Surgeon. Salary £120, rising to £140 per annum, at the discretion of the Committee of Management, with residence and board in the hospital.

UNIVERSITY OF GLASGOW.—Assistant Examiner in Medicine. The annual fee for the Examinership is £30.

Births, Marriages, and Deaths.

BIRTHS.

ADAMS.—On Aug. 7th, at Kilcrone, Oxford, the wife of G. D'Arcy Adams, M.D., of a daughter.

ARNOLD—On Aug. 13th, at Park-road, Forest-hill, the wife of Ernest C. Arnold, M.B., F.R.C.S. Eng., of a daughter.

ASKIN.—On Aug. 10th, at Alderton, Woodbridge, Suffolk, the wife of T. Cuming Askin, M.D., of a son.

LARDER.—On Aug. 14th, the wife of Herbert Larder, Medical Superintendent Whitechapel Infirmary, of a daughter.

MARRINER.—On Aug. 12th, at Westbourne Tower, Poole-road, Bournemouth West, the wife of W. H. L. Marriner, M.B. Lond., of a son.

SANDWITH.—On Aug. 15th, at 7, Queen's Gate, S.W., the wife of Fleming Sandwith, of Cairo, of twin daughters.

MARRIAGES.

BOLSTER—BELL.—On Aug. 16th, at the Parish Church, Stoke-next-Guildford, Surgeon-Major J. McM. Bolster, F.R.C.S.I., Army Medical Staff, to Violet Mary, elder daughter of the late Arthur Bell, M.B., Surgeon 30th Regiment.

CHAPMAN—LEWIS.—On Aug. 10th, at the Priory Church, Brecon, Paul Morgan Chapman, M.D. Lond., M.R.C.P. Lond., to Alice Elizabeth, only daughter of the late Rev. J. R. Lewis, of Cascob Rectory, Radnorshire.

COX—LANE.—On Aug. 10th, at the Church of St. Mary, Woodborough, Wilts, by the Rev. J. Sturton, assisted by the Rev. Mills Robbins, cousin of the bride, Dr. A. E. Cox, of Southport, son of E. B. Cox, Esq., of Nottingham, to Rose Matilda Lane, youngest daughter of E. Lane, Esq., Manor House, Woodborough.

HORTON—EVANS.—On Aug. [illegible]th, at St Mary's, Stoke Newington, Wilfred Winnal Horton, M.D., youngest son of William Horton, late of Stanway Manor, Shropshire, to Ellen Fanning (Nellie), youngest daughter of the late Rev. Edward J. Evans, 16, Roseleigh-avenue, Highbury.

OSMOND—ROTHERY.—On Aug. 17th, at all Saint's Church, Pontefract, by the Rev. E. S. Hore, M.A., Edward Bartrum Osmond, M.R.C.S., L.R.C.P., son of Arthur Osmond, late P. and O., to Marguerite Alice, youngest daughter of William Rothery, late of Harrowgate.

SHEEHY—LANNES.—On July 26th, at St. Bartholomew's Church, Sydenham, W. H. Patmore Sheehy, L.R.C.P. Lond. &c., of Claremont-square, London, to Frances M. S. Lannes, of Castledine, Upper Norwood.

DEATHS.

ALLEN.—On Aug. 15th, at Greasley House, Belper, aged 5 years, William Douglas, the darling child of Dr. and Mrs. R. G. Allen.

CROOKES.—On Aug. 15th, at Augusta-gardens, Folkestone, John Farrar Crookes, F.R.C.S., in his 82nd year.

HALL.—On Aug. 6th, 1892, at Dalton House, Dalton-in-Furness, Edward Hall, Surgeon, aged 84 years. (Interred at the Dalton Cemetery on the 10th inst.)

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births Marriages, and Deaths.

Notes, Short Comments & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

THE STUDENTS' NUMBER.

WE beg to call the attention of the Deans of Medical Schools and the Secretaries of Hospitals to the announcement that the Students' Number of THE LANCET for the session 1892-93 will be published on Saturday, Sept. 3rd. We also invite from them and from the members of the profession information regarding hospitals, institutions for medical education &c.—such particulars as are of importance to students generally, both in connexion with the general medical qualifications, the dental qualifications, and the qualifications in public health. This should be sent to the Sub-editor, THE LANCET Office, Strand, not later than the 25th inst.

A "TRAVELLER'S TALE."

THE following remarkable illustration of credulity has appeared in the lay press under the title of "A Medical Mystery at Ath." A pottery workman of Rebaix some time ago noticed a swelling in front of the wall of his abdomen, which gradually increased, and which was opened by a leading practitioner at Ath, who discovered a large snail inside the swelling, of a kind common in the gardens round about! The snail has been preserved and is being exhibited by the ingenious and enterprising patient to the townspeople at the small charge of one franc per head. We are certainly inclined to attach more credence to the latter than to the former part of this latest instance of the craze for the marvellous.

An Enquirer.—In all cases where there is any doubt as to the cause of death, and especially where the necessary evidence can only be obtained from a medical man, we are of opinion that such should be required by the coroner. In the case mentioned by our correspondent, however, the facts appear so clear that we think the coroner acted with discretion. It must be remembered that the funds at his disposal are the property of the community, whose interests he is bound primarily to serve, provided it be consistent with the demands of justice.

TREATMENT OF RINGWORM.

To the Editors of THE LANCET.

SIRS,—Having recently read several articles as to the treatment of ringworm, and as I have had much experience in the treatment of this affection in India, where it is very prevalent, I would suggest the following—viz.: The affected region should first be washed with soap and warm water containing a little carbonate of soda and then well dried. Acetic acid should then be thoroughly applied with a small brush, and in the lapse of about five minutes, when the acid will have soaked into the part, an ointment composed of sixty grains of chrysophanic acid to an ounce of lanoline should be rubbed in. This treatment should be carried out daily for such a period as may be necessary.

I am, Sirs, yours faithfully,

Dublin, Aug. 13th, 1892. CRAWFORD WARREN, F.R.C.S.I.

A MEDICAL NOVELIST.

THE prose fiction of all countries owes much to its medically trained contributors. In Great Britain it can point to Tobias George Smollett, Oliver Goldsmith, John Moore (whose once famous "Zeluco" even yet repays perusal), and Charles Lever, to say nothing of Albert Smith and Conan Doyle. France can boast of Eugène Sue, the last of a long line of anatomists and surgeons, and now Italy sustains the part with Leonzio Capparelli, whose death on March 29th last deprived Naples of an able and much-esteemed consultant. Dr. Capparelli was known to the profession as the author of carefully-thought-out and well-written books on debatable points of medicine and surgery, the first of them published in 1856; but not till five years ago (in 1887) did he give the world a specimen of his powers as a novelist. His "Dr. Pietra," the work referred to, is a singularly interesting story, conveying in a vivid yet chastened style the experiences of a life fraught with adventure and dramatic incident. Its success was such that its readers regretted that its author did not cultivate his genius for prose fiction more assiduously; but an agreeable surprise was in store for them. His daughter, the Signorina Clotilde Capparelli, found among his posthumous papers a completed tale entitled "In Illo Tempore," and this she has just edited for the publishing firm of G. Barbèra in Florence. The plot is laid in the fever preserves and criminal substrata of Naples during the worst period of the demoralising reign of Bomba, and it presents the reader with a powerfully drawn picture of the struggle for existence in surroundings characterised by Mr. Gladstone as "the negation of God upon earth." Concurrently with this tale the Signorina Capparelli has sent forth a revised edition of "Dr. Pietra," containing its author's latest improvements on the original text, and both works ought to find many readers among those who have watched the Italian "Risorgimento" from its apparently desperate beginnings to its bright consummation in "Italy one and independent." All who, in view of the International Congress to be held in Rome next year, are desirous of getting up a working knowledge of Italian could not do better than initiate themselves in the attractive and uninvolved periods of Dr. Leonzio Capparelli's two romantic stories.

Dr. Thurnfield.—The note on the arrow poison of the New Hebrides was taken from *Les Nouveaux Remèdes*, June 24th. M. le Dantec's paper was communicated to the Société d'Anatomie et de Physiologie de Bordeaux, and will doubtless be found in the Proceedings of that body.

Mr. F. M. Keeling.—Our correspondent should consult his medical attendant.

LOCUM TENENS AND FEES AT INQUESTS.

To the Editors of THE LANCET.

SIRS,—Would you kindly give me your opinion, or the general ruling of the profession on the following?

A gentleman whilst acting as locum tenens is called to attend on a case which involves a coroner's inquest, but the locum tenens' time expires one day before the inquest takes place. He, however, calls the next day to see when the inquest is to be held, and being told at 10.30 of that morning, he receives the coroner's order and duly attends and gives evidence. To whom does the fee of one or two guineas belong, the locum tenens or the gentleman who engaged him?

I am, Sirs, yours truly,

Aug 16th, 1892. M.D.

*** In the first place, whether the principal or his locum tenens shall receive coroners' fees depends upon the terms of agreement. If no special arrangement is made, clearly all fees earned by the locum tenens belong to his employer. The above case, as given by our correspondent, is somewhat different. The engagement having been contracted by the locum tenens during his tenure of duty, the consequences, including the fees, would naturally fall to the principal; but inasmuch as the services of the locum tenens were required after his time had expired, we are of opinion that division of the fees would be an equitable settlement.—ED. L.

MEDICAL ADVERTISING IN DUBLIN.

A CORRESPONDENT complains that in the higher ranks of medical practice in Dublin there is a disposition to use the fashionable newspaper as a medium of announcing one's whereabouts, whether at home or from home, and he sends us cuttings which support his complaint. *Verbum sapienti*, &c. It is idle to expect the rank and file of the profession to be more exemplary in this respect than their leaders. They have a right to look for an example of reticence and quietness in the upper ranks of practice. Paragraphs, obviously inspired or supplied, giving the movements of medical men are a violation of this spirit, and ought to be rigidly suppressed both in London, Dublin, and elsewhere by all who respect the traditions of the profession.

THE HOURS BETWEEN CONTERMINOUS EXAMINATIONS.

A CORRESPONDENT writes:—"In the universal system of examination under which this country is at present groaning there is one source of strain which has hitherto escaped notice. I refer to the short interval between conterminous periods of examination. Up to twenty years ago that interval was always two hours. Now it is seldom more than an hour. In the Oxford and Cambridge local examinations, in the examinations of the Scotch universities, of the Civil Service Commissioners and of the University of London it is only one hour. In the examinations of the University of Cambridge the length of the interval curiously varies. In the pass examination it is one hour; in the examinations of the classical and minor triposes it is an hour and a half; in the examination of the mathematical tripos it alternates between two hours and three hours and a half. On what principle the Cambridge practice is based I do not know; but as a matter of health an interval of two hours after an examination lasting three hours is desirable. An average examinee of either sex requires an hour for fresh air and rest of brain and an hour for food before resuming labour. By inferior candidates the longer interval may be, of course, applied to some process of special cramming—learning by heart parts of a 'crib,' strings of dates, mathematical or chemical formulæ, for instance—which may produce injustice; but the extent to which it would produce this effect would be, I conceive, very trifling. The most experienced coach can seldom forecast with much success the contents of even a pass examination paper. On the other hand, serious injury may result from 'bolting' a hasty meal after crouching for three hours over a desk or table in a more or less impure atmosphere, and then resuming for three hours more the same constrained position."

L.R.C.P.Lond. (Warrington).—Our correspondent might address a communication to the Secretary of the Prison Department, Home Office, and to the Permanent Under-Secretary of the Colonial Office respectively.

"ELECTRIC BELTS."

To the Editors of THE LANCET.

SIRS,—Will you kindly let me ask through your columns any medical men who may have patients who have complaints to make of certain so-called electric belts to communicate with me, if they so desire, in reference to this matter? The public-spirited action of the editor of the *Hawk* deserves the support of our profession.

I am, Sirs, yours faithfully,

A. GEORGE BATEMAN,
Hon. Secretary, Medical Defence Union.

64, Longridge-road, S.W., Aug. 16th, 1892.

A PAINFUL INCIDENT.

A CORRESPONDENT of the Vienna *Abendblatt* is responsible for the following statement:—One morning the medical superintendent of a large lunatic asylum requested an attendant to hand him a pair of scissors. Perceiving something unusual in the aspect and demeanour of his chief, the attention of one of the physicians was drawn to the circumstance, when he was both surprised and alarmed by the announcement from the lips of the superintendent that it was his intention to open the skulls of some of his patients in order to ascertain the exact condition of their cerebral development. It thus became evident that the brain which had been for so long responsible for the medical oversight of the afflicted inmates of his asylum had itself become deranged, a circumstance not unique in the history of neurological research.

Dr. Allen.—The circumstances of such cases as that referred to us by our correspondent are so varied and complicated by domestic detail and questions of expediency that the lunacy and other laws—e.g., those relating to the appointment and powers of guardians and trustees—would have to be undergoing a continuous process of amendment if the exceptional points in individual cases had to be legislated for. A suitable guardian and trustee is usually supposed to be able to look after the best interests of his ward on a consideration of all the circumstances of the case.

A. B. will see that we have not overlooked the question.

FUCUS VESICULOSUS.

To the Editors of THE LANCET.

SIRS,—I shall be obliged if any of your readers who have had experience with extract of fucus vesiculosus would give me some information about it. I believe there are some precautions to be used in its administration, but do not know what they are. Does it reduce superfluous fat? Or does it only act like iodine? Is there any wasting of glandular structures produced by it? Has it any influence on the shortness of breath which most stout people complain of? Any information will oblige,

Yours truly,
August, 1892. INQUIRENS.

MEDICAL ADVERTISING.

A CORRESPONDENT sends us the following cutting from the *Liverpool Daily Post* of the 16th inst., and pertinently suggests that the idea seems to be rather a new one.

"*The Doctors in Liverpool.*—Services will be rendered first three months free of charge. A staff of eminent German and American Physicians and Surgeons have permanently located in Liverpool, corner of Benson-street and Mount Pleasant (entrance on Benson). All who visit these eminent Doctors before September 1st will receive services first three months free. All forms of chronic diseases and deformities are treated, especially male and female weakness, catarrh, catarrhal deafness, &c., but no incurable cases will be accepted. The doctors will examine you thoroughly free of charge; and, if incurable, will frankly, kindly tell you so. The object in pursuing this course is to become rapidly and personally acquainted with the sick and afflicted. Catarrh and catarrhal deafness is positively cured by their American treatment. Office Hours—9 A.M. to 8 P.M.; Sundays, 10 to 12."

Here is another specimen from Saturday's *Huddersfield Examiner*:—

"*Kirkheaton.*—*Medical.*—Mr. Benjamin S. Lockwood, son of Dr. Lockwood of Kirkburton, who passed the final examinations held at Edinburgh in April last, and was granted the diplomas of the Royal College of Physicians, the Royal College of Surgeons, Edinburgh, and Licentiates of the Faculty of Physicians and Surgeons of Glasgow, has, we understand, commenced to practise near the Kirkheaton Railway Station, at the very spot where his grandfather, old Doctor Lockwood, commenced, nearly eighty years ago.—ADVT."

We certainly commend this latter unblushing notification to the attention of the Colleges mentioned above.

Mr. H. Button (Manchester).—Our correspondent would probably obtain the information by application to the Emigrant's Information Office, 31, Broadway, London, S.W.

THE FLY PLAGUE.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of this week is mentioned the plague of fly bites. I am a great sufferer, and cannot sit under my fig tree in summer without suffering this penalty. Last year, whilst in North Wales, I tried iodine soap and then carbolic, but found them useless. The only relief was obtained from a compress of a solution of carbonate of ammonia. If any of my professional brothers would advise me, I should be very grateful.—I am, Sirs, yours obediently,

Aug. 16th, 1892. A SENIOR F.R.C.S.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Ackerley, Ashburton; Dr. Barlow, London; Dr. Bateman, London; Dr. James B. Ball, London; Mr. W. G. Black, Newcastle; Messrs. Benger and Co., Manchester; Mr. S. H. Boult, Liverpool; Messrs. Bonthron and Co., London; Mr. Birchall, Liverpool; Messrs. Burroughs, Wellcome and Co., London; Mr. T. B. Browne, London; Messrs. Boulton and Paul, Norwich; Dr. Beaumont, Southampton; Messrs. Blondeau and Co., London; Mr. Bedborough, London; Dr. D. di Bona, Naples; Mr. H. Button, London; Messrs. Barker, London; Messrs. Blackie and Son, London; Mr. Buxey, Southampton; Mr. Sherman Bigg, London; Mr. Cocking, Sheffield; Dr. Cox, Southport; Dr. H. Martyn Clark, Edinburgh; Mr. Cooke, London; Mr. Henry Cartmel, London; Dr. Andrew S. Currie, Tellsplatte; Dr. G. D. Dreping, Southend; Mr. J. C. Davis, Ruabon; Mr. J. Davidson, Uxbridge; Messrs. Davies and Co., London; Mr. Davies; Mr. J. B. Emerson; Mr. Fraser, Glasgow; Mr. W. F. Ferry; Dr. J. H. Garrett, Cheltenham; Dr. W. Austin Gosford, London; Mr. Gordon, Selby; Dr. Garman, Kendal; Mr. W. F. Greenhalgh, Leeds; Messrs. Humphreys, London; Mr. Adrian Hope; Mr. Hornibrook, Bloomsbury; Messrs. Hockin, Wilson and Co.; Mr. Hunt, Manchester; Mr. Haviland, Edinburgh; Messrs. W. and A. K. Johnston, Edinburgh; Messrs. Krohne and Sesemann, London; Mr. Kirby, Ben Rhydding; Messrs. Knight and Co., London; Mr. J. Lewis, London; Mr. Lamb, London; Mr. Thomas Leeds, London; Mr. Livingstone, Edinburgh; Mr. Larcombe, Sunderland; Mr. Mosse, London; Dr. D. C. McVail, Glasgow; Dr. Keith Norman MacDonald, Skye; Mr. Marshall, Pontefract; Mr. Milner, Kennington; Messrs. McKeever, Carlisle; Messrs. Maclehose and Sons, Glasgow; Mr. T. S. Mill, Wakefield; Messrs. Mitchell and Co., London; Mr. H. Widenham Maunsell, London; Mr. E. J. May, London; Mr. McMurtrie, Glasgow; Dr. S. P. Newbolt, Liverpool; Messrs. Oppenheimer, Son and Co., London; Dr. W. F. Prout, Gold Coast; Mr. Pentland, Edinburgh; Mr. Purser, Belfast; Mr. Stephen Paget, London; Messrs. Potter and Sacker, London; Mr. H. Bowen Perkins, Newport; Mr. B. Denison Pedley, London; Dr. Cuthbert Rutherford, Kilmaurs; Mr. C. Roberts, London; Messrs. Robertson and Scott, Edinburgh; Mr. E. J. Reed, London; Messrs. Street and Co., London; Dr. Sandwith, London; Mr. Sears, London; Dr. Octavius

Sturges, London; Mr. Sampson, Gloucestershire; Messrs. Truelove and Shirley, London; Mr. Taylor, Windermere; Messrs. Thorp and Co., Glossop; Messrs. J. T. Usher, Bristol; Messrs. Whitworth and Stuart, Manchester; Mr. C. A. Wright, Rochester; Dr. W. Wilfrid Webb, Plymouth; Mr. Wilson, Liverpool; Mr. Crawford Warren, Dublin; A. J., London; Bedford General Infirmary; *British and Colonial Druggist*, London; Carolus, London; G. H., London; Inquirens; Lex; Montgomery Infirmary; Pond's Extract Co., London; Reflex, London; Secretary, Yorkshire College, Leeds; Sanitary Wood Wool Co., London; S. G., London; S. V.; Secretary, Sussex County Hospital, Brighton; Urbanus, London; V. M. O.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Affleck, Wantage; Dr. Bingham, Alfreton; Mr. Bexaley, Dudley; Mr. Brown, Westgate-on-Sea; Dr. Bonsall, Aberystwyth; Mr. Browne, Kenilworth; Mr. Bromilow, Taunton; Dr. Cosgrave, Bolton; Mr. Davies, Rhyl; Dr. Davies, North Wales; Dr. Davis, Bath; Mr. Dale, South Devon; Mr. Fisher, Newport; Mr. Foley, co. Galway; Messrs. Hogg and Son, London; Mr. Haycock, Alfreton; Mr. Heywood, Manchester; Mr. Hall, Chesterfield; Mr. Illingford, Accrington; Mr. Jackson, Workington; Mr. Jackson, Sheffield; Mr. Kirton, Leigh; Mr. Lewis, Wingham; Mr. Lamb, Wolverhampton; Mr. McElfatrick, Mere; Miss Marriott, Surbiton; Mr. Mann, Leith; Dr. Magruder, New Orleans; Mr. Marshall, London; Dr. Morgan, Clapton-park; Miss Meinly, Parsons-green; Dr. McDougall, Runcorn; Mr. North, Little Marlow; Mr. Nicholls, Bury St. Edmunds; Mr. Norman, South Devon; Mr. Osburne, Hythe; Messrs. Phillips and Son, Newtown; Miss Pudney, Earl's Colne; Mr. Penfold, Ashford; Miss Rickards, Dartford; Dr. Redwood, Cardiff; Mr. Rowley, Barnsley; Mr. Robson, co. Derry; Dr. Roocroft, Wigan; Mr. Sutherland, co. Durham; Mr. T. Smith, London; Mr. Scatchard, York; Messrs. W. H. Smith and Son, London; Mr. Stothard, Dalton-in-Furness; Messrs. Stent and Son, Guildford; Mr. Tyte, Minchinhampton; Mr. Thornhill, Manchester; Mr. Thin, Edinburgh; Mrs. Theobald, Leicester; Mr. Wand, Leicester; Mr. Wyllie, Ockley; Dr. White, Brighton; M. Woodman, Bridgewater; Mr. Wilson, Sunderland; Messrs. Wemyss, Norfolk; A. D., London; Agricola, London; Alpha, Bolton; A G., Rowley Regis; Alpha, London; B. T., London; Bouillon Fleet Co., London; C. F., London; Clayton, Edinburgh; Cheshire, London; Clanranald, London; D., London; D. T., St. Helens; Duplex; Faithful, London; Gamma, London; G. T., London; J. B. T., Swansea; Kops Brewery, Wandsworth; Locum, Forest Gate; Lumleys, London; 301, Mile End-road; Medicus, Northampton; M.R.C.S., Weymouth; Medicus, London; M., London; Multum, London; Medicus, Crewe; M. M. B., London; Nemo, London; Octo, London; Omega, London; P. K., Exeter; Physician, London; Reflex, London; R., London; Racquets, London; Secretary, Royal United Hospital, Bath; Trouble, London; X. Y. Z., London; Zero, London.

NEWSPAPERS.—*Le Temps (Paris)*, *Leeds Mercury*, *Liverpool Courier*, *Manchester Guardian*, *English Mechanic*, *Liverpool Daily Post*, *Rangoon Gazette*, *South Wales Daily News*, *Scotsman*, *Newcastle Chronicle*, *Falkirk Herald*, *Port Elizabeth Telegraph (Cape of Good Hope)*, *Citizen*, *Birmingham Gazette*, *Glasgow Herald*, *Dewsbury Reporter*, *Scottish Leader*, *Sunday Times*, *Bicester Advertiser*, *Portsmouth Evening News*, *Brighton Argus*, *Ripley Advertiser*, *Dover Standard*, *Daily Times (Kingston, Pa.)*, *West Middlesex Standard*, *Windsor and Eton Gazette*, *Reading Mercury*, *Insurance Record*, *Hertfordshire Mercury*, *Local Government Chronicle*, *Nottingham Daily Express*, *Weekly Free Press and Aberdeen Herald*, *Mining Journal*, *Local Government Journal*, *Builder*, *Chester Courant*, *Architect*, *Wolverhampton Chronicle*, *Eastbourne Gazette*, *Windsor and Eton Express*, *West Middlesex Advertiser*, *Public Ledger (Philadelphia)*, *Barrow Herald Highland News*, *Coventry Mercury*, *Surrey Advertiser*, *Huddersfield Chronicle*, *Saturday Herald (Dublin)*, *Inverness Courier*, *Westmoreland Gazette*, *Kentish Independent*, *Kingston Daily News*, *Times of India*, *Pioneer Mail*, &c., have been received.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Aug. 19th, 1892.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry bulb.	Wet Bulb.	Solar Radia in Vacuo	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Aug 12	30·14	S.W.	62	57	118	74	53	—	Hazy
„ 13	29·80	S.W.	67	61	124	77	57		Cloudy
„ 14	29·84	S.W.	67	61	121	75	59	·81	Cloudy
„ 15	29·89	S.W.	65	59	127	77	59	..	Cloudy
„ 16	30·10	S.W.	64	59	96	70	57	..	Cloudy
„ 17	29·91	S.W.	67	64	123	82	60	·74	Hazy
„ 18	29·82	S.E.	65	64	106	73	61	·08	Raining

Medical Diary for the ensuing Week.

Monday, August 22.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M., and on Tuesday, Wednesday, Friday, and Saturday at the same hour.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M. and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

Tuesday, August 23.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.
GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electrotherapeutics, same day, 2 P.M.

Wednesday, August 24.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1.30 P.M.; Saturdays, 2 P.M. Obstetrical Operations, Thursdays, 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M. Surgical Visits on Wednesday and Saturday at 9.15 A.M.

Thursday, August 25.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

Friday, August 26.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, August 27.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

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